

Storm Water Pollution Prevention Plan

For Compliance with EPA's 2008
Multi-Sector General Permit (MSGP)

Joint Base Elmendorf-Richardson
U.S. Air Force, Alaska

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| G | Record of Maintenance and Repairs |
| H | Annual Reporting Form |
| I | Additional MSGP Documentation Template |
| J | Numeric Water Quality Standards |
| K | Industrial Stormwater Monitoring and Sampling Guide |
| L | No Exposure Certifications |

LIST OF ACRONYMS AND ABBREVIATIONS

| | |
|------------------|---|
| 673 CES/CEAN | 673 Civil Engineering Squadron/Civil Engineering Asset Natural Resource |
| AAC | Alaska Administrative Code |
| ACGP | Alaska Construction General Permit |
| ADEC | Alaska Department of Environmental Conservation |
| AKANG | Alaska Air National Guard |
| AKARNG | Alaska Army National Guard |
| AMS | Aerospace Material Specification |
| APDES | Alaska Pollutant Discharge Elimination System |
| AST | Aboveground storage tank |
| BMP | Best management practice |
| BOD ₅ | Biochemical Oxygen Demand |
| CBI | Confidential Business Information |
| CFR | Code of Federal Regulations |
| COD | Chemical Oxygen Demand |
| CSCE | Comprehensive Site Compliance Evaluation |
| CWA | Clean Water Act |
| DLA | Defense Logistics Agency |
| DMR | Discharge Monitoring Report |
| EAFB | Elmendorf Air Force Base |
| ELG | Effluent limitations guidelines |
| EMS | Environmental Management System |
| eNOI | Electronic Notice of Intent |
| EPA | U.S. Environmental Protection Agency |
| FES | Fire and Emergency Services |
| FOD | Foreign object damage |
| HM | Hazardous material |
| HW | Hazardous waste |
| HWAA | Hazardous waste accumulation area |
| INRMP | Integrated Natural Resources Management Plan |
| JBER | Joint Base Elmendorf-Richardson |
| JBER-E | JBER-Elmendorf |
| JBER-R | JBER-Richardson |
| JP | Jet Propellant |

| | |
|--------------------|--|
| MDMR | MSGP Industrial Discharge Monitoring Report |
| MEP | Maximum extent practicable |
| MS4 | Municipal Separate Storm Sewer System |
| MSDS | Material Safety Data Sheets |
| MSGP | Storm Water Multi-Sector General Permit |
| NEPA | National Environmental Policy Act |
| NMFS | National Marine Fisheries Service |
| NOI | Notice of Intent |
| NPDES | National Pollutant Discharge Elimination System |
| OPLAN 19-3 | JB ER OPLAN 19-3 Environmental Management Plan |
| OWS | Oil/water separators |
| POL | Petroleum, oil, and lubricants |
| POV | Privately owned vehicles |
| RAA | Recyclable materials accumulation area |
| RCRA | Resource Conservation and Recovery Act |
| SAA | Satellite accumulation area |
| SHPO | State Historic Preservation Officer |
| SIC | Standard Industrial Classification |
| SPCC/C-Plan | Spill Prevention, Control, and Countermeasure Plan / Oil Discharge Prevention and Contingency Plan |
| SWMP | Storm Water Management Plan |
| SWPPP | Storm Water Pollution Prevention Plan |
| TMDL | Total Maximum Daily Load |
| TSDF | RCRA permitted treatment, storage, or disposal facility |
| TSS | Total Suspended Solids |
| UEC | Unit environmental coordinator |
| USAF | U.S. Air Force |
| USFWS | U.S. Fish and Wildlife Service |
| UST | Underground storage tank |
| Waters of the U.S. | Waters of the United States |
| WLA | Waste Load Allocation |

1.0 INTRODUCTION

This document has been prepared for Joint Base Elmendorf-Richardson (JBER) to satisfy the Storm Water Pollution Prevention Plan (SWPPP) requirements of the U.S. Environmental Protection Agency's (EPA's) 2008 Multi-Sector General Permit (MSGP) for storm water discharges associated with industrial activity. Appendix A is a summary of the 2008 MSGP requirements establishing the contents of this SWPPP, with references to the sections of this document that meet the respective MSGP SWPPP requirements.

This SWPPP documents storm water management practices at industrial facilities at JBER, Alaska and is a guide for the installation's pollution prevention team. The following information is summarized in the plan:

- Alaska Department of Environmental Conservation (ADEC) requirements for the contents of this SWPPP
- Responsibilities for storm water pollution prevention at JBER
- A description of JBER in the context of storm water hydrology and discharges to waters of the United States (waters of the U.S.)
- A discussion of activities and potential pollutants that could contaminate storm water
- Control measures JBER has implemented to minimize the potential for storm water pollution, including basic, activity-specific, and sector-specific best management practices (BMPs)
- Requirements associated with monitoring, record keeping, and reporting under the current storm water permit

1.1 Storm Water Pollution Prevention Plan

The MSGP requires the permittee to prepare a SWPPP and specifies what must be included in that plan (i.e., identification of potential sources of storm water pollution, descriptions of practices on the installation to reduce storm water pollution, and measures to ensure compliance with the terms and conditions of the MSGP). Part 5 of the MSGP details the information required in the SWPPP. The body of this document comprises JBER's SWPPP for industrial activities.

This plan is organized as follows:

- Section 1.0 describes the different EPA and ADEC storm water permits and their requirements, discusses the purpose of the SWPPP and the Storm Water Management Plan (SWMP), and responsibilities of the pollution prevention team under the 2008

MSGP and SWPPP. The history of storm water compliance on former Elmendorf Air Force Base (EAFB) and former Fort Richardson is also summarized in this section.

- Section 2.0 describes JBER's location, topography, and drainage.
- Section 3.0 provides a discussion of industrial activities at JBER and potential pollutant sources associated with them.
- Section 4.0 discusses control measures that all industrial facilities at JBER must implement to address activities and potential pollutants described in Section 3.0.
- Section 5.0 discusses activity-specific control measures that minimize potential pollution of waters of the U.S. from individual industrial activities.
- Section 6.0 discusses sector-specific control measures that apply to industrial facilities within respective industrial sectors. No Exposure Certification for industrial facilities is discussed in this section.
- Section 7.0 presents schedules and procedures for monitoring.
- Section 8.0 details required storm water pollution prevention inspections under the MSGP, including quarterly facility inspections, the quarterly visual assessment of storm water discharges, and the annual Comprehensive Site Compliance Evaluation (CSCE).
- Section 9.0 discusses documentation to support eligibility for MSGP coverage (i.e., endangered species, historic properties, and non-storm water discharges).
- Section 10.0 describes the SWPPP signatory requirements and certification.
- Section 11.0 addresses SWPPP modifications and availability requirements for this document.

1.2 Regulatory Framework

Under the authority of the Clean Water Act (CWA), EPA established rules to protect waters of the U.S. from pollutants transported by storm water runoff. These regulations are part of the National Pollutant Discharge Elimination System (NPDES) regulations found in Title 40 of the Code of Federal Regulations Part 122.26 (40 CFR 122.26) and mandate that storm water dischargers obtain permits for discharges to waters of the U.S. In October 2009, EPA authorized ADEC to administer and enforce the NPDES program in the State of Alaska. As a result of this change, facilities in Alaska requiring storm water permits are required to obtain an Alaska Pollutant Discharge Elimination System (APDES) permit from ADEC. There are three basic categories of discharges that necessitate obtaining APDES storm water discharge permits:

- Discharges associated with industrial activity

- Discharges from municipal separate storm sewer systems (MS4s)
- Discharges associated with construction

1.2.1 Industrial Storm Water Permit

Operators of industrial facilities in Alaska that discharge storm water to waters of the U.S., either directly or through an MS4, must obtain an APDES industrial storm water permit. They may apply either for an individual APDES permit or make use of the general permit established for this purpose. Rather than develop a new general permit for industrial storm water discharges, ADEC uses EPA's 2008 MSGP as the general permit for industrial storm water discharges in Alaska¹. "Storm Water Discharges Associated With Industrial Activity" is a regulatory term defined in 40 CFR §122.26(b)(14)(i-xi). The majority of JBER facilities with discharges that meet this definition are Sector S (Air Transportation) facilities that support airfield operations on the JBER-Elmendorf (JBER-E) Airfield. Other industrial facilities at JBER include Sector K (Hazardous Waste Treatment, Storage, or Disposal) facilities, gravel quarrying operations (Sector J – Non-Metallic Mineral Mining and Dressing), and the Defense Logistics Agency Document Services (Sector X – Printing and Publishing).

1.2.2 Municipal Separate Storm Sewer System Permit

The APDES storm water program requires operators of regulated small MS4s (i.e., MS4s serving populations less than 100,000) to obtain authorization to discharge storm water under an APDES permit. EPA considers JBER to own and operate a regulated small MS4 "by rule." This determination required JBER to submit a small MS4 permit application to ADEC. Since there is presently no general permit for small MS4s, ADEC is expected to issue JBER an individual permit². The main provision of an MS4 permit is to prepare and implement a SWMP that explains how the permittee will minimize potential pollution of waters of the U.S. from MS4 storm water runoff.

JBER submitted a small MS4 permit application and draft SWMP³ to ADEC in January 2012. These documents were under review by ADEC at the time this SWPPP was prepared. JBER's draft SWMP documents MS4 program goals and associated BMPs to achieve the goals. JBER's MS4 permit will cover facilities and activities that discharge storm water runoff to the JBER storm sewer system, including discharges from residential areas, construction activities,

¹ The October 30, 2009, "MSGP Transition from EPA to ADEC" joint EPA and ADEC FAQ document states:

"The permit that is in effect is the EPA permit issued February 26, 2009 and is set to expire September 29, 2013. ADEC will continue to use that permit until a new permit is reissued."

² ADEC's June 27, 2012 Permit Issuance Plan indicates the intent to issue an individual MS4 permit to JBER in 2012.

³ Draft Storm Water Management Plan, Joint Base Elmendorf-Richardson, November 2011

industrial-like activities, and the industrial activities covered by the MSGP that are discussed in this SWPPP.

As such, the MS4 program is the umbrella program for all storm water management on JBER, and this industrial SWPPP is one component of storm water management on the installation.

1.2.3 Construction Storm Water Permits

Although federal and State of Alaska storm water regulations consider construction to be an industrial activity, the MSGP does not cover storm water discharges from construction activities. A construction storm water permit must be obtained for construction disturbing one or more acres of land. In the State of Alaska, ADEC's 2011 Alaska Construction General Permit⁴ (ACGP) is the typical mechanism for obtaining such coverage. Additionally, to reinforce protection of receiving waters in areas that drain to regulated MS4s during and after construction, JBER's draft SWMP includes minimum control measures for construction and post-construction runoff control. Thus, construction projects at JBER must comply with the installation's SWMP in addition to the terms of the ACGP.

1.3 History of Industrial Storm Water Compliance on JBER

EAFB and Fort Richardson operated under separate industrial storm water permits and each installation developed individual SWPPPs⁵ prior to merging as a joint base in October 2010. This section provides an overview of the compliance approach previously taken by the Air Force and the Army with regard to the respective industrial SWPPPs, and explains why some facilities and industrial sectors that were included in previous SWPPPs have not been included in this current plan, and why some facilities not previously included in those SWPPPs have been added.

The EAFB and Fort Richardson SWPPPs were prepared by different organizations, with different approaches to storm water compliance. One commonality between the two, however, was the inclusion of facilities that did not meet the regulatory definition of "industrial⁶." The NPDES regulations and MSGP use the Standard Industrial Classification (SIC) system to define what facilities are considered "industrial" in terms of storm water discharges, and thus which are required to be included in industrial storm water permits.

In 1990, when the EPA established industrial storm water permitting under Phase I of the NPDES program, the regulated community struggled to interpret the regulations and

⁴ Alaska Pollutant Discharge Elimination System General Permit for Discharges From Large and Small Construction Activities, July 2011 (at time of SWPPP preparation); consult ADEC website for most current permit.

⁵ Fort Richardson Storm Water Pollution Prevention Plan, May 2009; Elmendorf Air Force Base Storm Water Pollution Prevention Plan, May 2009.

⁶ 40 CFR 122.26(b)

requirements. Many military installations conducted activities similar to those listed under the SIC codes, at facilities that did not meet the regulatory definition of “industrial”. Thus, non-industrial facilities such as vehicle and equipment maintenance shops that conducted “industrial-like” activities were included in installation SWPPPs as a means for managing storm water runoff from those activities. This resulted in the inclusion of more facilities in the industrial SWPPPs than necessary, especially once more appropriate compliance mechanisms, such as MS4 permits, were available for non-industrial operations.

In October 2009, just prior to the merger of EAFB and Fort Richardson, ADEC assumed primacy of the NPDES program in Alaska. By regulation, EAFB and Fort Richardson were both required to submit MS4 permit applications and prepare SWMPs to reduce contamination of storm water discharges to the maximum extent practicable (MEP). EAFB and Fort Richardson submitted MS4 permit applications and SWMPs to EPA in May 2009. Following implementation of joint basing, JBER submitted an MS4 permit application and draft SWMP for the newly combined installation.

Only facilities meeting the regulatory definition of industrial must be included in this SWPPP. The following section clarifies which facilities are now included in this plan, and how the remainder of JBER will be addressed by the JBER MS4 permit and SWMP.

1.3.1 Changes to the List of Facilities Included in the JBER SWPPP Subsequent to the May 2009 EAFB and Fort Richardson SWPPPs

1.3.1.1 Removal of Non-Industrial Facilities

The bulk of facilities that were included in the SWPPPs developed for EAFB and Fort Richardson in May 2009 are facilities that do not meet the regulatory definition of industrial. The two installations managed the inclusion of such facilities differently in their respective SWPPPs. EAFB identified industrial-like activities as industrial and assigned them to the SIC that most closely matched activities performed at the respective facilities, whereas Fort Richardson managed industrial-like facilities similarly to their industrial counterparts, but identified them as “industrial-like” (i.e., non-industrial) in its SWPPP. These industrial-like facilities are not included in this new JBER SWPPP, but will be managed under the MS4 SWMP. The draft JBER SWMP discusses how these non-industrial, or industrial-like facilities, will be managed to reduce contamination of storm water to the MEP. Table 1 identifies which facilities have been removed from this SWPPP.

Sector P on EAFB

Industrial-like facilities included in the May 2009 EAFB SWPPP were listed as Sector P (Land Transportation and Warehousing). Sector P covers industrial activities from the following SIC descriptions:

- Motor Freight Transportation Facilities

- Passenger Transportation Facilities
- Petroleum Bulk Oil Stations and Terminals
- The U.S. Postal Service
- Railroad Transportation Facilities

After considerable analysis, it is JBER's position that there are no Sector P facilities on the installation. Although some activities at maintenance facilities, fueling points, vehicle and equipment washing facilities, etc., are similar to those requiring BMP implementation under Sector P, the primary activity at these facilities do not match the transportation SIC. Thus, these facilities are industrial-like for purposes of storm water compliance and will be managed under the JBER SWMP upon issuance of the MS4 permit by ADEC.

Industrial-Like Activities at Fort Richardson

Fort Richardson conducted a sector analysis prior to preparing the May 2009 SWPPP and concluded that Sector P was not applicable to activities conducted on the installation. Numerous facilities that had been listed as Sector P activities in previous Fort Richardson SWPPPs were included in the May 2009 SWPPP, but described as industrial-like (i.e., not affiliated with a SIC). Those facilities are not included for coverage in this SWPPP, but will be managed under the JBER SWMP.

1.3.2 Facilities Added to this JBER SWPPP for MSGP Coverage Since the May 2009 EAFB and Fort Richardson SWPPPs

A facility analysis was conducted in preparation of this SWPPP to determine the industrial status of JBER facilities. This analysis identified nineteen industrial facilities operating at JBER that were not included in the May 2009 EAFB or Fort Richardson SWPPPs. The primary explanation of why these facilities were not included in previous SWPPPs is that they are new activities that support the storage, maintenance, and fueling of F-22s. Other additions to the list are satellite operations associated with listed facilities (i.e., equipment storage buildings, fuel-vehicle parking areas, etc.) that may not have previously conducted industrial activities.

Included in Table 1 are industrial facilities at JBER managed by this SWPPP that were not previously managed by EAFB and Fort Richardson SWPPPs.

1.3.3 No Exposure Certification

Some facilities that were identified in previous EAFB and Fort Richardson SWPPPs, including one facility ADEC has already recommended for No Exposure certification, are not regulated under this SWPPP because they meet the requirements for No Exposure under 40 CFR 122.26(g). These facilities are included in Table 1 and identified as such. No Exposure Certification is discussed in detail in Section 6.3 of this SWPPP.

1.4 JBER Contact Information

1.4.1 Owner/Operator

United States Air Force – Joint Base Elmendorf-Richardson
673 Civil Engineering Group
6346 Arctic Warrior Drive
JBER, AK 99506-3240
Base Operator: 907-552-1110

1.4.2 SWPPP Contact

Gary Fink
Chief CEAN
6346 Arctic Warrior Drive
JBER, AK 99506-3240
Phone: 907-552-5746
Fax: 907-552-1533
Email: Gary.Fink@us.af.mil

1.4.3 24-Hour Emergency Contact

JBER Fire and Emergency Services
11415 Fighter Drive
JBER, AK 99506
Emergency line (on base): 911
Non-emergency line: 907-552-2801

1.5 Storm Water Pollution Prevention Team

JBER has established a storm water pollution prevention team with responsibilities as described in Table 2. The Water Program Manager has primary responsibility for ensuring compliance with the MSGP and SWPPP, and for documenting compliance. These compliance responsibilities are summarized in Table 3. All members of the pollution prevention team have reviewed this SWPPP and are aware of their roles and responsibilities. Team members with the most direct responsibilities for preventing pollution of storm water runoff include facility personnel, unit environmental coordinators (UECs), in-house maintenance personnel and contractors, and the Water Program Manager.

Table 1. List of JBER Industrial Facilities and Facilities Removed From SWPPP

| Facility Identification | Description | Industrial Sector | Industrial with No Exposure | Removed from JBER SWPPP® |
|---------------------------------|--|-------------------|-----------------------------|--------------------------|
| JBER-Richardson (JBER-R) | | | | |
| 560 | Service Station | | | X |
| 700 | Maintenance Facility | | | X |
| 702 | Fueling Facility | | | X |
| 704 | Vehicle and Equipment Maintenance Facility | | | X |
| 706 | Self Help Facility | | | X |
| 710 | Service Station | | | X |
| 721 | Pesticide Management Facility | | | X |
| 726 | Laundry Facility | | | X |
| 732 | Vehicle and Equipment Maintenance Facility | | | X |
| 740 | Vehicle and Equipment Maintenance Facility | | | X |
| 743 | Sand/Salt Storage Facility | ◆ | | X |
| 750 | Vehicle Maintenance Facility | | | X |
| 754 & 755 | Vehicle Car Wash/Maintenance Facility | | | X |
| 756 | Vehicle Maintenance Facility | | | X |
| 778 | Vehicle Maintenance Facility | | | X |
| 784 | Vehicle Maintenance Facility | | | X |
| 789 | Warm Storage Facility | | | X |
| 794 | Maintenance/Outdoor Storage Facility | | | X |
| 796 | Vehicle/Weapon Maintenance Facility | | | X |
| 798 | Vehicle Maintenance Facility | | | X |
| 804 | Warehouse | | | X |
| 806 | Vehicle Maintenance Facility* | | | X |
| 812 | Warehouse | | | X |
| 955/T2 | Oil/water separator (OWS) Sludge Storage | | | X |
| 971 | Tactical Vehicle Wash Facility | | | X |
| 974 | Vehicle/Equipment Maintenance Facility | | | X |
| 975 | Vehicle Maintenance Facility | | | X |
| 976 | Vehicle Maintenance Facility* | | | X |
| 979 | Vehicle Maintenance Facility | | | X |
| 982 | Vehicle Maintenance Facility* | | | X |
| 984 | Document Services Facility | | X | |
| 986 | Fuel Testing Lab | | | X |
| 988 | Fueling Facility* | | | X |
| 992 | Fueling Facility | | | X |
| 27004, 27010, & 27011 | Golf Course Storage/Fueling/Maintenance | | | X |

| Facility Identification | Description | Industrial Sector | Industrial with No Exposure | Removed from JBER SWPPP® |
|--|---|-------------------|-----------------------------|--------------------------|
| 35750 | Transmitter Facility | | | X |
| 45125, 45133 & 45135 | Hazardous Waste Storage | K | | |
| 45715 | Vehicle Maintenance Facility* | | | X |
| 45726 | Vehicle Maintenance Facility | | | X |
| National Guard Facilities at JBER-R Covered Under a Separate MSGP (Permit Number: AKR05DA73) | | | | |
| 47427 | National Guard Hangar 6 | | | X |
| 47428 | National Guard Ground Support | | | X |
| 47430 | National Guard Hangar 1 | | | X |
| 47431 | National Guard Hangar 4 | | | X |
| 47438 | Bryant Airfield Fueling Facility | | | X |
| | Bryant Airfield Runway | | | X |
| 49040 | National Guard Maintenance Facility | | | X |
| 49100 | National Guard Maintenance Facility | | | X |
| 57428 | Camp Carroll Maintenance Shop | | | X |
| JBER-E | | | | |
| 3786 | Fire Station | | | X |
| 3805 | Vehicle Wash Facility | | | X |
| 3827 | Service Station | | | X |
| 4314 | Hazardous Waste Storage | K | | |
| 4416, 4421, 6532, & 6538 | Golf Course Storage/Fueling/Maintenance | | | X |
| 5223 | Vehicle/Equipment Maintenance Facility | | | X |
| 6210 | Service Station | | | X |
| 6211 | Vehicle/Equipment Maintenance/Wash Facility | S | | |
| 7201 | Fueling Facility | | | X |
| 7228 | Vehicle/Equipment Maintenance Facility | S | | |
| 7263 | Dry Storage Facility | | | X |
| 7265 | Vehicle/Aircraft Maintenance Facility | | | X |
| 7301 | Maintenance/Outdoor Storage Facility | | | X |
| 7309 | Maintenance Hangar | | | X |
| 8288 | Vehicle/Equipment Maintenance Facility | S | | |
| 8306 | Maintenance Facility | | | X |
| 8319 | Outdoor Vehicle/Equipment Storage* | S | | |
| 8324 | Vehicle/Equipment Storage | | | X |
| 8549/8574 | Vehicle/Equipment Maintenance Facility | S | | |

| Facility Identification | Description | Industrial Sector | Industrial with No Exposure | Removed from JBER SWPPP® |
|-------------------------|--|-------------------|-----------------------------|--------------------------|
| 8565 | Maintenance Hangar | | | X |
| 8681 | Maintenance Hangar | S | X | |
| 8691 | Maintenance Facility | S | X | |
| 9311 | Maintenance Hangar | S | X | |
| 9361 | Vehicle/Equipment Maintenance Facility | S | | |
| 9559 | Engine Test Cell | | | X |
| 9561 | Hush House | S | X | |
| 9563 | Hush House | S | X | |
| 9684 | Maintenance Hangar* | S | X | |
| 9694 | Maintenance Hangar* | S | X | |
| 9696 | Maintenance Hangar | S | X | |
| 10286 | Maintenance Hangar | S | X | |
| 10550 | Sand/Urea Storage Facility* | ◆ | | |
| 10555 | Aircraft Maintenance Facility | S | X | |
| 10565 | Aircraft Component Storage Facility | S | X | |
| 10567 | Aircraft Component Storage Facility | S | X | |
| 10571 | Maintenance Hangar | S | X | |
| 10682 | Maintenance Hangar* | S | X | |
| 10694 | Equipment Storage Facility* | S | | |
| 11415 | Fire Station | | | X |
| 11519 | Equipment Storage Facility* | S | X | |
| 11523 | Equipment Storage Facility* | S | X | |
| 11525 | Maintenance Hangar | S | X | |
| 11551 | Maintenance Hangar | S | X | |
| 11567 | Fuel Farm and Service Station | S | | |
| 11583 | Fuel Farm | S | | |
| 11728 | Pump Station | | | X |
| 11735 | Hazardous Waste Transfer Facility | K | | |
| 13196 | Pump House | S | | |
| 14313 | Deicer Storage and Transfer Facility* | S | | |
| 14410 | Maintenance Hangar | S | X | |
| 14415 | Equipment Maintenance Facility | S | | |
| 14416 | Fueling Facility | S | | |
| 14485 | Pump House | | | X |
| 15365 | Pump House 2 | S | | |
| 15366 | Fueling Facility | | | X |
| 15380 | Freight Terminal* | S | X | |
| 15431 | Physical Fitness Facility | | | X |

| Facility Identification | Description | Industrial Sector | Industrial with No Exposure | Removed from JBER SWPPP [Ⓞ] |
|---|---------------------------------|-------------------|-----------------------------|--------------------------------------|
| 15432 | Administration Facility | | | X |
| 15438 | Storage Facility | | | X |
| 15455 | Maintenance Hangar | S | X | |
| 15658 | Maintenance Hangar* | S | X | |
| 15699 | Fuel Farm | S | | |
| 15920 | Maintenance Facility* | | | X |
| 16385 | Pump House | S | | |
| 16422 | Fueling Facility | | | X |
| 16430 | Maintenance Hangar | S | X | |
| 16456 | Maintenance Hangar* | S | X | |
| 16468 | Maintenance Hangar | S | X | |
| 16519 | Maintenance Facility | | | X |
| 16521 | Maintenance Hangar | S | X | |
| 16670 | Maintenance Hangar* | S | X | |
| 16675 | Storage Facility* | S | X | |
| 16708 | Storage Facility*/** | | | X |
| 16710 | Fueling Facility* | S | | |
| 16716 | Maintenance Hangar | S | X | |
| 16718/17720 | Maintenance Hangar*/** | | | X |
| 17470 | Maintenance Hangar | S | X | |
| 17494 | Storage Facility* | S | X | |
| 17508 | Maintenance Hangar | S | X | |
| 17534 | Maintenance Hangar *** | | | X |
| 17660 | Maintenance Hangar* | S | X | |
| 17722 | Storage Facility | | | X |
| 18471 | Pump House | S | | |
| 23392 | Vehicle Maintenance Facility | | | X |
| 29453 | Airfield Fueling Point* | S | | |
| JBER-E Airfield | Airstrip, Taxiways, and Tarmacs | S | | |
| Notes: [Ⓞ] Facilities removed due to non-industrial status or demolished infrastructure. [◆] Salt storage alone is not considered an industrial activity, however, industrial facilities with salt storage activities must meet the requirements in MSGP Part 2.1.2.7. * Facilities that were not included in EAFB's and Fort Richardson's 2009 SWPPPs. ** Facility is undergoing significant modification; future use is not available/known at this time. *** Previously identified as an industrial facility; may conduct industrial activities in the future. | | | | |

Table 2. Installation-Wide Storm Water Pollution Prevention Team Members and Responsibilities

| Storm Water Team Responsibilities | JBER Commander | Chief, Civil Engineering Squadron/Civil Engineering Asset Natural Resource (CES/CEAN) | 773 Civil Engineer Squadron/Command Director | Water Program Manager, 673 CES/CEAN | Maintenance Contractors/ In-House | UECs and/or Unit Activity Supervisor |
|---|-----------------------|--|---|--|--|---|
| Level of Responsibility | Installation | Installation | Installation | Installation | Installation | Facility |
| Signs Certification of Compliance with SWPPP (or delegates signatory authority) | X | | | | | |
| Signs Certification of Non-Storm Water Discharge Evaluation | | | | X | | |
| Establishment and ongoing operation and maintenance for advanced BMPs | | X | X | X | X | X |
| Overall MSGP and SWPPP compliance | | X | | X | | |
| Annual CSCE | | X | | X | | |
| Update SWPPP | | X | | X | | |
| Coordinate SWPPP training and inspections | | | | X | | |
| Conduct outfall survey and non-storm water discharge investigation | | | | X | | |

Table 3. Water Program Manager Responsibilities

| Activity | Frequency/Due Date | Citation in 2008 MSGP |
|---|--|-----------------------|
| Plan/Permit Maintenance: | | |
| Prepare and implement a SWPPP according to the requirements in Part 5 of the 2008 MSGP. | Before submitting your Notice of Intent (NOI) for permit coverage | 1.3.1 and 5 |
| Submit a complete NOI in accordance with APDES guidelines by either using ADEC's Electronic Notice of Intent (eNOI) system or submitting paper forms to ADEC. | See MSGP Table 1-2 | 1.3.1 |
| Modify your SWPPP whenever necessary to address any of the triggering conditions for corrective action in MSGP Part 3.1 and to ensure that they do not reoccur, or to reflect changes implemented when a review following the triggering conditions in MSGP Part 3.2 indicates that changes to your control measures are necessary to meet the effluent limits in this permit. | As needed | 5.2 |
| Retain a copy of the current SWPPP at the facility and make immediately available to: <ul style="list-style-type: none"> • ADEC • EPA • A State, Tribal, or local agency approving storm water management plans • The operator of an MS4 receiving discharges from the site • Representatives of the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) • The general public upon request | On-going | 5.3 |
| Control Measures and Effluent Limits: | | |
| Select, design, install, and implement control measures (including BMPs) to address the selection and design considerations in MSGP Part 2.1.1, meet the non-numeric effluent limits in MSGP Part 2.1.2, and meet limits contained in applicable effluent limitations guidelines in MSGP Part 2.1.3. | On-going | 2.1 |
| Corrective Actions: | | |
| Document the location and type of control measures installed and implemented at the site. Review, revise, and modify (as needed) the selection, design, installation, and implementation of the control measures to ensure they are performing correctly. | Document in the SWPPP; On-going | 5.1.4.1, 3.1 and 3.2 |
| If control measures were revised or modified, document any corrective action(s) to be taken to eliminate or further investigate the deficiency, or if no corrective action is needed, the basis for that determination. (See MSGP Part 3.4.) | Within 14 days of discovery; Modify before the next storm event if possible, or as soon after as practicable | 3.2 |

| Activity | Frequency/Due Date | Citation in 2008 MSGP |
|--|--|-----------------------|
| Inspections: | | |
| Conduct routine facility inspections of all areas of the facility where industrial materials or activities are exposed to storm water, and of all storm water control measures used to comply with the effluent limits contained in the MSGP. | At least once each calendar quarter | 4.1.1 |
| Collect a storm water sample from each outfall and conduct a visual assessment of each of these samples. | Once each quarter for the entire permit term | 4.2.1 |
| Conduct comprehensive site inspections. <i>This inspection may also be used as one of the routine inspections, as long as all components of both types of inspections are included.</i> | Annually | 4.3.1 |
| Documentation: | | |
| <p>Keep the following inspection, monitoring, and certification records, plans, guidelines and reports with your SWPPP:</p> <ul style="list-style-type: none"> • A copy of the NOI submitted to ADEC along with any correspondence exchanged between you and ADEC specific to coverage under this permit; • A copy of the acknowledgment letter or email you receive from the NOI processing center or ADEC's Online Application System assigning your permit tracking number; • A copy of the 2008 MSGP (an electronic copy easily available to SWPPP personnel is also acceptable); • Descriptions and dates of any significant spills, leaks, or other releases that resulted in discharges of pollutants to waters of the U.S. • Records of employee training (see MSGP Part 2.1.2.9); • Documentation of maintenance and repairs of control measures (see MSGP Part 2.1.2.3); • All inspection reports, including the Routine Facility Inspection Reports (see MSGP Part 4.1), the Quarterly Visual Assessment Reports (see MSGP Part 4.2), and the Comprehensive Site Inspection Reports (see MSGP Part 4.3); • Description of any deviations from the schedule for visual assessments and/or monitoring, and the reason for the deviations (see MSGP Parts 4.2.1, 6.1.4, and 6.2.1.2); • Description of any corrective action taken at your site, including triggering event and dates when problems were discovered and modifications occurred; • Documentation of any benchmark exceedances and how they were responded to; • Documentation to support any determination that pollutants of concern are not expected to be present above natural background levels if you discharge directly to impaired waters, and that such pollutants were not detected in your discharge or were solely attributable to natural background sources (see MSGP Part 6.2.4.2); and | Ongoing | 5.4 |

| Activity | Frequency/Due Date | Citation in 2008 MSGP |
|---|--|-----------------------|
| <ul style="list-style-type: none"> Any additional documents referenced in the SWPPP (i.e., plans, policies, memorandums, etc.) that satisfy specific MSGP requirements [e.g., the JBER Spill Prevention, Control, and Countermeasure Plan / Oil Discharge Prevention and Contingency Plan (SPCC/C-Plan)⁷ and JBER OPLAN 19-3 Environmental Management Plan (OPLAN 19-3)⁸]. | | |
| Monitoring: | | |
| Monitor allowable non-storm water discharges (as delineated in Part 1.1.3) when they are commingled with storm water discharges associated with industrial activity. | Ongoing | 6.1.8 |
| Collect and analyze storm water samples and document monitoring activities consistent with the procedures described in MSGP Part 6 and Appendix B, Subsections 10 – 12, and any additional sector-specific or State/Tribal-specific requirements in MSGP Parts 8 and 9, respectively. | Frequency depends on type of monitoring. Region 10 monitoring requirements begin in the first full quarter following submittal of NOI. This will be the quarter ending March 31, 2013. | 6.2 |
| Continue to monitor, at least quarterly, until your discharge is in compliance with the effluent limit or until ADEC waives the requirement for additional monitoring. | Ongoing | 6.2 |
| Reporting and Recordkeeping: | | |
| All monitoring data collected must be submitted to ADEC. The MSGP Industrial Discharge Monitoring Report (MDMR) can be used for this purpose. | No later than 30 days after complete laboratory results for all monitored outfalls for the reporting period have been received | 7.1 |
| Submit an annual report to ADEC that includes the findings from the comprehensive site inspection and any corrective action documentation. | Within 45 days after conducting the comprehensive site inspection | 7.2 |

⁷ United States Air Force, Joint Base Elmendorf-Richardson, Alaska Spill Prevention, Control, and Countermeasure Plan / Oil Discharge Prevention and Contingency Plan, January 2012

⁸ JBER OPLAN 19-3 Environmental Management Plan, 673d Air Base Wing, February 2011

| Activity | Frequency/Due Date | Citation in 2008 MSGP |
|---|---|-----------------------|
| If follow-up monitoring pursuant to MSGP Part 6.3 exceeds a numeric effluent limit, submit an Exceedance Report to ADEC. | No later than 30 days after lab results have been received | 7.3 |
| Retain copies of your SWPPP (including any modifications made during the term of this permit), additional documentation requirements pursuant to MSGP Part 5.4 (including documentation related to corrective actions taken pursuant to MSGP Part 3), all reports and certifications required by this permit, monitoring data, and records of all data used to complete the NOI to be covered by this permit. | For a period of at least three years from the date that your coverage under this permit expires or is terminated. This period may be extended by request of ADEC at any time. | 7.5 |
| Submit No Exposure Certification(s) to ADEC every five years. | Every five years | 1.5 |
| MSGP Part 8 – Sector-specific Requirements: | | |
| Sector K – Hazardous Waste Treatment, Storage, or Disposal Facilities | | |
| NA | | |
| Sector S – Air Transportation Facilities | | |
| Determine the seasonal timeframe (e.g., December – February, October – March, etc.) during which deicing activities typically occur at the facility. | Annually | 8.S.3.2 |
| Conduct routine facility inspections. | Monthly | 8.S.5.1 |
| Conduct Comprehensive Site Compliance Evaluations during periods of actual deicing operations (if any). | Annually | 8.S.5.2 |

2.0 FACILITY DESCRIPTION

JBER is the largest military installation in Alaska, and is comprised of JBER-E (formerly EAFB, located at north 61°15' latitude, west 149° 48' longitude) and JBER-R (formerly Fort Richardson, located at north 61° 15' latitude, west 149° 40' longitude). JBER is located in south central Alaska and consists of approximately 74,455 acres, including ranges⁹. JBER is bound to the southwest by the Municipality of Anchorage, and to the northwest by the Knik Arm, an extension of the Cook Inlet. The southern and eastern boundaries traverse undeveloped land, much of which is in Chugach State Park. The community of Eagle River is located along the northeastern border. The Glenn Highway and Alaska Railroad traverse the installation. The location of JBER is depicted on Figure 1.

Surface relief ranges from tidewater on the northwest, to a ridge of the Chugach Mountains on the east that rises to a height of 4,000 feet at Arctic Valley, site of the old Nike Missile Site. However, the developed area that is the focus of this SWPPP is located between these two extreme areas on a relatively flat plateau that has a relief ranging from roughly 450 feet in the higher elevations down to less than 200 feet where it abuts Ship Creek.

The developed area is centrally located and consists of troop and family housing, administration, industrial, industrial-like, and community facilities. The topography at these locations is generally flat. Most of the developed area is unpaved, except for roads, facility parking areas, and airfield areas. A majority of the surrounding open space is devoted to training activities, which also supports a variety of wildlife species.

Specific drainage features of JBER-E and JBER-R are provided in the following sections.

2.1 JBER-E Drainage Network

There are six industrial storm water outfalls located on JBER-E, as indicated on Figure 2. Photos of each outfall are displayed on Figure 3. These outfalls are associated with different drainage areas, described below. In addition to discharging to the outfalls, storm water runoff from JBER-E drainage areas may enter Ship Creek and Knik Arm as sheet flow, infiltrate into the ground, and/or evaporate. Seventeen drainage areas have been identified on JBER-E, but only six of those areas have discrete outfalls to waters of the U.S. For purposes of this SWPPP, only the drainage areas that discharge to a defined outfall are discussed in this section.

Drainage Area 1 receives runoff from the majority of developed areas of the installation, including the JBER-E Airfield, which encompasses approximately 3,586 acres. Storm water in this drainage area enters the subsurface storm sewer system via catch basins located

⁹ Location and acreage information in this section was taken from the Joint Base Elmendorf-Richardson Integrated Natural Resource Management Plan (INRMP), February 2011.

throughout the drainage area, eventually emptying into the “Cherry Hill Ditch.” This ditch discharges to a weir designed to trap sediment on Port of Anchorage property. Water from this drainage area is considered JBER-E Outfall 1.

Drainage Area 2 encompasses approximately 378 acres of the installation. Storm water in this area enters the subsurface storm sewer system via catch basins. This water empties outside the installation boundary to the west, approximately 300 feet south of the Cherry Hill Ditch. This water eventually flows into the same weir as Drainage Area 1, with storm water subsequently discharging to Knik Arm. Water from this drainage area is considered JBER-E Outfall 2.

Drainage Area 3 encompasses approximately 96 acres of the installation. Storm water in the area is channeled into culverts and discharges on the south side of the installation into an engineered wetland. The wetland is located on property owned by the Alaska Railroad Corporation and was designed as part of a system for remediating contaminated groundwater. This is considered JBER-E Outfall 3.

Drainage Area 4 encompasses approximately 97 acres of the installation, and is located north of the railroad right-of-way, east of Kenny Avenue, and northwest of Pease Avenue. The northern boundary is Arctic Warrior Drive. Storm water in this drainage area is channeled through culverts, eventually draining into Ship Creek at JBER-E Outfall 4. This is the only drainage area described in this section that does not contain industrial facilities.

Drainage Area 5 is situated north of the railroad, between Vandenburg Avenue to the east, and Talley Avenue to the west. The approximate area is 154 acres. Storm water from this area is piped underneath the railroad tracks to the south, eventually draining into Ship Creek at JBER-E Outfall 5.

The sixth industrial outfall at JBER-E is located at Six Mile Lake, in Drainage Area 10. Drainage Area 10 is north of the developed portions of JBER-E, north of Drainage Area 1, and encompasses approximately 2,517 acres. Six Mile Lake is considered a water of the U.S., and it drains to an outlet stream (Six Mile Creek) at the west end of the lake, which continues to flow west to the Knik Arm.

Figure 4 (inserted between Section 11 and the appendices) presents storm water conveyances on JBER-E, the direction of storm water flow, and surface water detention areas.

2.2 JBER-R Drainage Network

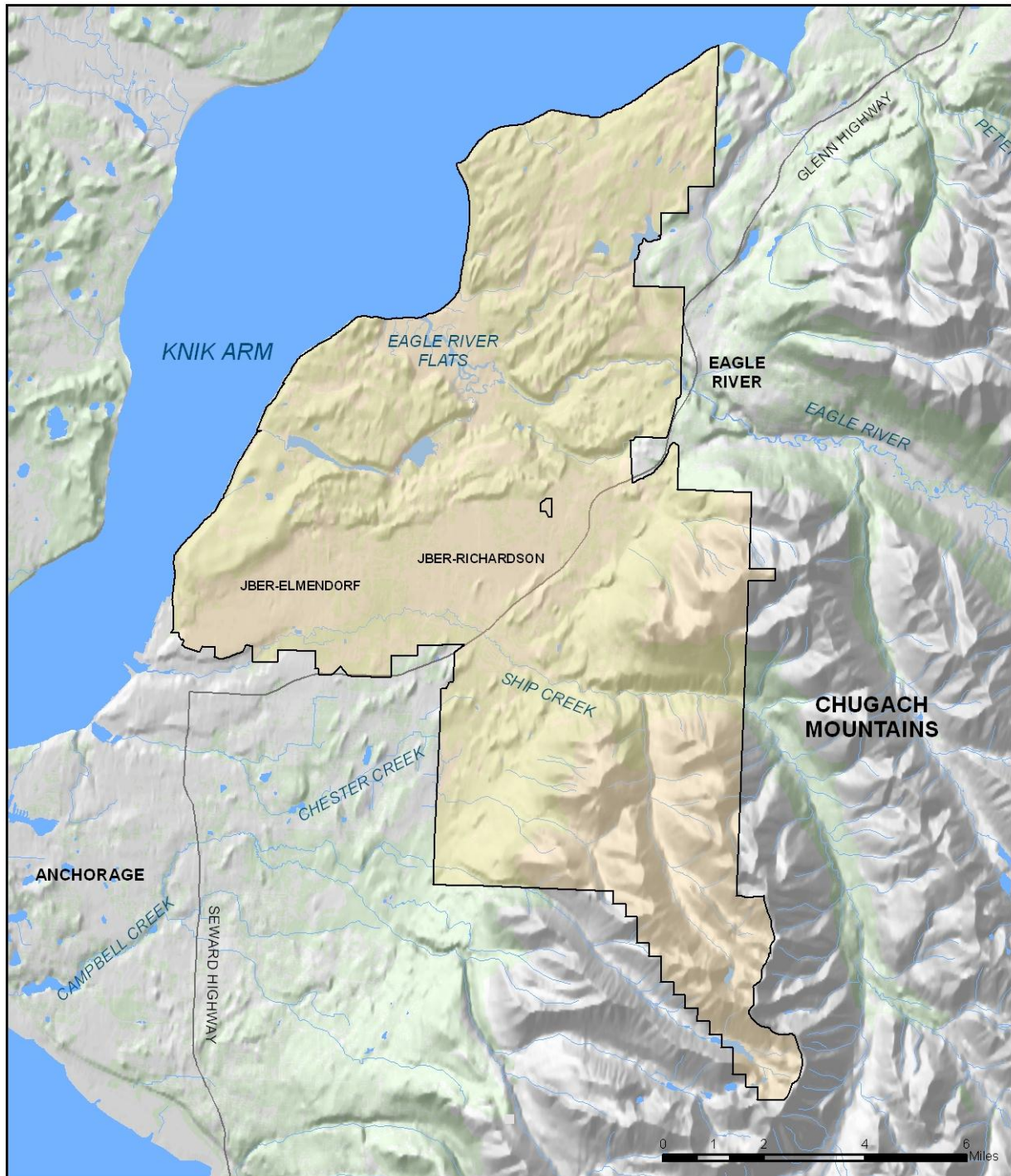
Natural and urban runoff on JBER-R is generally directed toward a single outfall at Ship Creek referred to as JBER-R Outfall 1. This outfall is depicted on Figures 2 and 3. Surface-drainage from the developed area of JBER-R enters the storm sewer system via three separated drainage networks, or infiltrates into the ground. The three drainage areas eventually daylight in the southeast section of the developed area and flow into a single, unlined ditch that leads to an infiltration basin before discharging to Ship Creek. The drainage area boundary of the

developed portion of JBER-R is breached by two Alaska Department of Transportation off-site sources of surface water that ultimately reach Ship Creek by way of the developed drainage system. The storm water originates from the Glenn Highway lateral drainage ditch and enters JBER in the area of the main JBER-R gate and through a 24-inch culvert at Arctic Road. Both are known to cause minor flooding and pooling during spring break-up.

At this time, no industrial activities covered by JBER's MSGP discharge storm water to JBER-R Outfall 1. More detailed discussions of surface water drainage on the installation can be found in JBER's INRMP and SWMP.

Figure 5 (inserted between Section 11 and the appendices) presents storm water conveyances at JBER-R, the direction of storm water flow, and surface water detention areas.

Figure 1. Location Map



Location Map

Joint Base Elmendorf-Richardson, Alaska

Legend



Installation Boundary

Total acreage: 74,455 acres (approximate)

Figure 2. Location of Outfalls and Industrial Buildings and Activity Areas

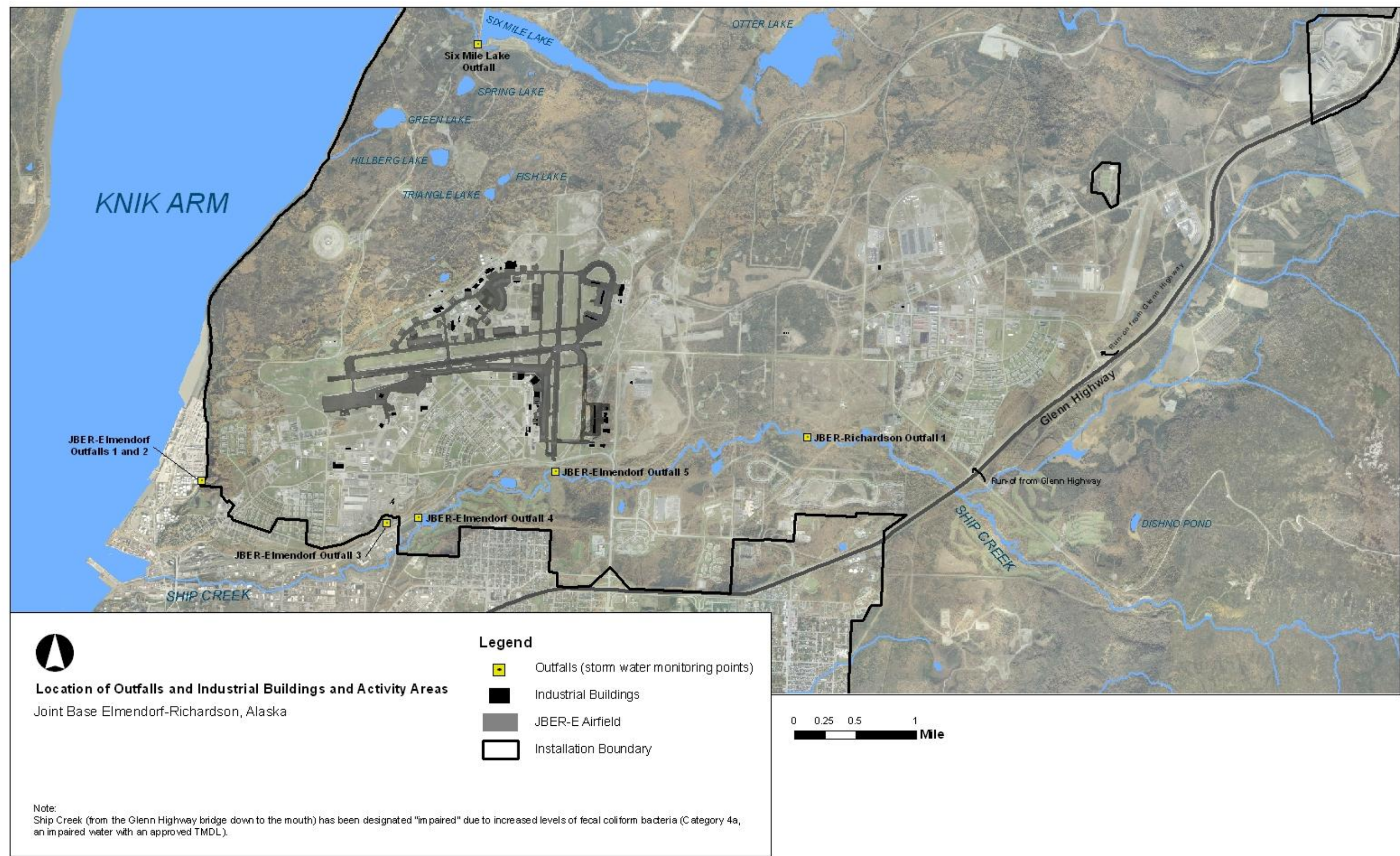


Figure 3. JBER Outfalls



The weir where JBER-E Outfalls 1 and 2 meet, just west of installation boundary on POA property.



Cherry Hill: Area of JBER-E Outfall 1 (drainage underground), just east of where it meets Outfall 2 at the weir.



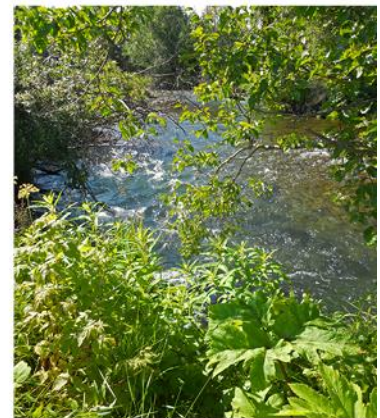
JBER-E Outfall 2, just south of the weir where it meets Outfall 1.



JBER-E Outfall 3 drains into an engineered wetland, just south of the installation boundary.



Where JBER-E Outfall 4 drains into Ship Creek.



Where JBER-E Outfall 5 drains into Ship Creek.



Six Mile Lake Outfall



Where JBER-R Outfall 1 drains into Ship Creek.

Note:
At the time this SWPPP was prepared, JBER-R Outfall 1 was not receiving storm water discharges from industrial activities managed by this SWPPP.

3.0 POTENTIAL POLLUTANT SOURCES

Part 5.1.3 of the MSGP requires a summary be included in this SWPPP of industrial materials and activities at JBER with a description of associated potential pollutant sources. This section identifies potential storm water pollution sources associated with industrial activities at JBER, including the storage and use of industrial materials and material handling. Control measures that address these activities, materials, and associated pollutants are discussed in SWPPP Sections 4, 5, and 6.

The following sections describe typical pollutants associated with these activities.

3.1 Activities and Associated Pollutants

Principal activities at JBER that represent a potential impact to storm water are associated with the following:

- Fueling
- Vehicle, aircraft, and equipment maintenance
- Vehicle, aircraft, and equipment washing
- Loading and unloading materials
- Runway deicing/anti-icing
- Locations used for the treatment, storage or disposal of wastes
- Liquid storage tanks
- Outdoor storage areas

The industrial facilities where these activities are performed are presented in Table 4. Figure 6 (inserted between Section 11 and the appendices) depicts the locations of potential pollutant sources at JBER.

3.1.1 Fueling

The majority of fueling operations at JBER involve military aircraft, military and contractor vehicles and equipment, and privately owned vehicles (POVs). Fuel is stored in a variety of containers including aboveground storage tanks (ASTs), underground storage tanks (USTs), mobile tanker trucks, and bowsers (portable tow-behind tanks). Fuels include diesel, gasoline, and jet fuel, which are transferred by a variety of methods including fixed dispensers and mobile tanker vehicles. The JBER SPCC/C-Plan details the locations of bulk fuel storage, types of fuels stored, and descriptions of the storage tanks. A copy of the SPCC/C-Plan is maintained

with this SWPPP by 673 CES/CEAN. A copy is also provided to the JBER Fire and Emergency Services (FES) and fueling and fuel maintenance flights.

Activity-specific BMPs for fuel transfer and storage in ASTs and USTs are referenced in Section 5.1.

3.1.1.1 Pollutants Associated with Fueling

Pollutants associated with fueling are primarily saturated and aromatic hydrocarbons associated with the following fuel types:

- Diesel fuel
- Gasoline
- Jet Propellant (JP)-8

3.1.2 Vehicle, Aircraft, and Equipment Maintenance

Vehicle, aircraft, and equipment maintenance is conducted at designated locations at JBER. They include vehicle and equipment maintenance facilities, aircraft hangars, and industrial trade shops. Activities include maintenance on hydraulic systems, engines, sheet metal work, batteries, avionics electronics, and painting work.

An aggressive program has been implemented to conduct maintenance activities indoors, where spills and leaks can be contained and directed to OWSs and/or fuel/oil separators, preventing contact with storm water. Although the majority of aircraft maintenance occurs in hangars, some maintenance is conducted on the flight line as necessary. BMPs described in Section 5.2 are implemented when possible and/or safe to do so, when outdoor maintenance must occur. Over the years, JBER has made efforts to reduce the inventory of stored HM, re-stock products only as necessary, and store smaller containers. Additionally, facilities use less-hazardous products when practicable.

The OPLAN 19-3 details proper materials management that is effective in reducing accidents that could expose HM to run-on and runoff. Activity-specific BMPs for vehicle, aircraft, and equipment maintenance are presented in Section 5.2.

3.1.2.1 Pollutants Associated with Vehicle, Aircraft, and Equipment Maintenance

Pollutants associated with vehicle, aircraft, and equipment maintenance include:

- Lubricating oil and grease
- Fuel
- Sediment

- Paint
- Transmission and hydraulic fluids
- Antifreeze
- Parts-cleaning solvent
- Battery acid

3.1.3 Vehicle, Aircraft, and Equipment Washing

Discharge of water to the storm drainage system used to wash vehicles, aircraft, and equipment is not allowed under the MSGP. Vehicle, aircraft, and equipment washing is conducted in designated areas at JBER. These areas include maintenance facility wash racks, aircraft maintenance hangars, and dedicated vehicle and equipment wash facilities on the installation. Wash racks at these facilities contain all wash water, sediment and associated contaminants to prevent their entry into the storm drainage system.

Wash racks on the installation are plumbed to an OWS. Only soaps approved for OWS use are allowed, unless the wash rack is designed to process other soaps and detergents. Typically, only water or steam is used on wash racks plumbed to an OWS.

U.S. Air Force (USAF) and Alaska Air National Guard (AKANG) aircraft are routinely washed in maintenance hangars at the JBER-E Airfield with non-emulsifying aircraft soap. These hangars have strip drains that are plumbed to OWSs. The OWSs pass water to the sanitary sewer after separating out petroleum, oil, and lubricants (POLs). Hangar floors are made of concrete and are sloped towards the drains so wash water does not leave the hangars. Aircraft washing protocols at JBER, including the use of OWSs, prevent discharge of wash water to JBER's storm sewer system and waters of the U.S.

The systems described above are included in JBER's preventive maintenance program. They are serviced at regular intervals and/or when necessary.

Activity-specific BMPs for vehicle, aircraft and equipment washing are presented in Section 5.3.

3.1.3.1 Pollutants Associated with Vehicle, Aircraft, and Equipment Washing

Pollutants associated with vehicle, aircraft, and equipment washing include:

- Lubricating oil and grease
- Fuel
- Antifreeze
- Windshield fluid

- Detergents (containing nutrients such as phosphates or surfactants)
- Sediment

3.1.4 Loading and Unloading Materials

Materials that are regularly loaded or unloaded at JBER are those associated with the fueling and maintenance of vehicles, equipment, and aircraft, such as oil, fuel, parts cleaner solvents, coolants, batteries, etc. The most common containers are 55-gallon drums and 5-gallon cans, though products come in a variety of container types and sizes. Loading and unloading activities present a potential threat for the release of chemicals, as materials are often moved multiple times with the use of equipment, such as forklifts. Operational BMPs have been implemented to address this concern.

Salt is occasionally staged outdoors in cubic-yard waterproof sacks on pallets prior to being brought into buildings where it is mixed with sand and gravel for use on installation roads. Hazardous materials and waste for disposal are drummed or otherwise containerized at the facilities where they are generated, and are picked up by the JBER waste turn in contractor as needed prior to being brought to the installation's treatment, storage, and disposal facility (TSDF) (see Section 3.1.6).

Activity-specific BMPs for loading and unloading materials are presented in Section 5.4.

3.1.4.1 Pollutants Associated with Loading and Unloading

Pollutants associated with loading and unloading include:

- Lubricating oils and greases
- Fuels
- Transmission and hydraulic fluids
- Antifreeze
- Parts-cleaning solvents
- Battery acid
- Detergents (containing nutrients such as phosphates or surfactants)
- Paint

3.1.5 Deicing and Anti-Icing at JBER-E Airfield

Deicing and anti-icing of aircraft and pavement occurs on the JBER-E Airfield¹⁰. Figure 7 depicts all airfields on the installation¹¹. The typical deicing season at JBER is between October 15 and April 15. Aircraft type and mission dictate aircraft deicing locations at the airfield. Two types of products are typically utilized on aircraft at JBER-E Airfield: Aerospace Material Specification (AMS) 1424, Type I Deicing Defrosting Fluid, to remove ice on aircraft, and AMS 1428, Type IV Anti-icing Fluid, to prevent build up of ice during flight. Potassium acetate and sodium acetate are applied to airfield pavement to prevent icing.

Table 3-1 in the 2012 JBER SPCC/C-Plan lists the size, types, and locations of storage tanks used for aircraft deicing/anti-icing fluids.

Activity-specific BMPs for deicing and anti-icing are presented in Section 5.5.

3.1.5.1 Pollutants Associated with Deicing/Anti-icing

The chemicals used at JBER-E Airfield for deicing/anti-icing are glycol based products, and inorganic salts. These products may contain:

- Ethylene glycol
- Propylene glycol
- Magnesium acetate
- Calcium acetate
- Sodium acetate

3.1.6 Locations Used for the Treatment, Storage, or Disposal of Wastes

Industrial waste management, including HW management and handling, primarily occurs at Sector S maintenance facilities at JBER. 673 CES/CEAN operates a short-term (less than 90 day) hazardous waste and recyclable materials storage facility on the installation. Facilities that generate HW and/or HM suitable for recycling operate satellite accumulation areas (SAAs), hazardous waste accumulation areas (HWAAs), recyclable materials accumulation areas (RAAs), and/or used oil tanks, and are scheduled for regular pickup of these materials by a contractor. Prior to transportation of wastes off the installation, HM/HW is brought to the JBER Conforming Storage Facility.

¹⁰ At the time this SWPPP was prepared, industrial activities and associated storm water discharges at Bryant Airfield on JBER-R were being managed under the Alaska Army National Guard's (AKARNG's) MSGP (Permit Number: AKR05DA73), and are therefore not discussed in this SWPPP.

¹¹ Mapping airfields is a sector-specific requirement in Part 8.S.4.1 of the MSGP.

Accumulation areas are located indoors or in grounded, vented, and contained, outdoor storage units (commonly referred to as “white elephants”) designed for that purpose. Accumulation areas are aggressively managed with adherence to appropriate safeguards and controls against spills, such as secondary containment pallets and spill response kits.

Specific procedures for industrial waste management at JBER are described in OPLAN 19-3 and must be implemented in addition to the requirements of this SWPPP, where applicable.

Activity-specific BMPs for industrial waste management are presented in Section 5.6.

3.1.6.1 Pollutants Associated with Industrial Waste Management

Pollutants associated with industrial waste management include:

- Used lubricating oils and greases
- Used fuels
- Used transmission and hydraulic fluids
- Used antifreeze
- Used parts-cleaning solvents
- Used batteries (and associated chemicals)
- Used aerosol cans

Facility personnel maintain inventories of HM at their individual facilities, as well as RCRA required record keeping, as applicable.

3.1.7 Liquid Storage Tanks

The 2012 JBER SPCC/C-Plan lists 120 active ASTs and 92 active USTs on the installation containing fuel, used oil, or deicing fluid. The majority of these tanks store fuel for vehicle, equipment, and aircraft fueling activities, supply heating fuel to buildings, and collect used oil. JBER ASTs range in capacity from 60 gallons to 3,500,000 gallons. Three 3,500,000-gallon capacity tanks storing JP-8 exist at the bulk fuel storage complex north of the JBER-E Airfield. JBER USTs range in capacity from 300 gallons to 50,000 gallons. Six 50,000-gallon USTs containing JP-8 are located at Farms 4 and 5, south of the JBER-E Airfield. Two 420,000-gallon ASTs for deicing fluid storage are located north of the airfield.

The management of liquid storage tanks at JBER, including training and fuel handling requirements and procedures are detailed in the JBER SPCC/C-Plan. The SPCC/C-Plan is maintained with this SWPPP by 673 CES/CEAN, and copies are provided to the JBER FES and fueling and fuel maintenance flights.

JBER aggressively manages liquid storage tanks and fueling activities that involve them. Operational requirements of the SPCC/C-Plan ensure a high standard for management of these activities. Activity-specific BMPs for fuel handling are referenced in Section 5.1. Sector-specific requirements for fueling at Sector S facilities are presented in Section 6.1.3.5.

Industrial facilities at JBER with POL storage in ASTs and USTs and bulk deicing fluid storage fall under Sector S.

POL storage in liquid storage tanks at JBER is managed by the JBER SPCC/C-Plan.

3.1.7.1 Pollutants Associated with Liquid Storage Tanks

Pollutants associated with liquid storage tanks include:

- Diesel fuel
- Gasoline
- JP-8
- Heating fuel
- Lube oil
- Used oil
- Used fuel
- Deicing/anti-icing fluid

3.1.8 Outdoor Storage Areas

Most materials at JBER that present a potential source of storm water pollution are stored indoors or under fixed cover, such as a pole barn. Outdoor storage at industrial facilities is intermittent depending on season, facility operations, and mission. Under the MSGP, even releases of non-hazardous chemicals (e.g., biodegradable soap) from industrial facilities to storm water runoff is prohibited, and must be safeguarded from the occurrence. Outdoor storage occurs secondary to indoor storage, when indoor space is limited. Materials stored outdoors can include POLs, antifreeze, and batteries. Portable fuel storage containers such as bowzers are occasionally staged outside Sector S facilities. Whenever materials are stored outdoors that present a potential for storm water contamination, BMPs must be implemented to address that potential.

Activity-specific BMPs addressing the storage of materials, vehicles and equipment are presented in Section 5.7 of this SWPPP. Additional requirements for outdoor storage of HM at JBER can be found in Chapter 7.8 of the JBER OPLAN 19-3.

3.1.8.1 Pollutants Associated with Outdoor Storage Areas

Pollutants associated with outdoor storage areas include:

- Fuels
- Lubrication oils
- Antifreeze
- Battery acid
- Metals
- Residue from coal tar creosote from pressure-treated wood
- Residue from chromated copper arsenate from pressure-treated wood

3.2 Spills and Leaks

If not properly controlled and promptly addressed, spills and leaks could be significant, potential sources of storm water pollution at JBER. The MSGP requires the SWPPP to document all significant spills and leaks of oil or toxic or hazardous pollutants that occurred at exposed areas, or that drained to a storm water conveyance, during the three years prior to the date of SWPPP preparation or amendment.

Additionally, the MSGP requires that the SWPPP identify the locations where potential spills and leaks could occur. Due to the nature of activities at JBER and the population of vehicles, equipment, and aircraft, spills could occur virtually anywhere on the installation. To mitigate this potential, JBER has an aggressive spill prevention and response program, requiring spills and leaks to be immediately reported as discovered, applicable personnel trained in spill prevention and response, and preventive maintenance to be made a cornerstone of the program. In addition to this SWPPP, personnel at industrial facilities must adhere to provisions in JBER's SPCC/C-Plan and OPLAN 19-3. Locations where spills and leaks may be more likely to occur than others include fuel transfer areas, vehicle and equipment storage yards and parking areas, and airfields and associated areas. Multiple operating procedures reduce the likelihood of spills and leaks to occur at these locations.

Part 5.1.3.3 of the MSGP requires mapping significant spills and leaks of oil or toxic or hazardous pollutants that occurred at "exposed areas," or that drained to a storm water conveyance, during the 3 years prior to preparing or amending the SWPPP. Appendix B is a summary of spills and leaks reported at JBER in the three years previous to preparation of this SWPPP (July 2009 through June 2012). The summary is sorted by date and provides the spilled material, spill volume and location, cause of the spill or leak, and for some, the method of cleanup and disposal. Figure 8 depicts the locations of these spills and leaks, and identifies spills to waters of the U.S. or conveyances leading to waters of the U.S.

Table 4. List of Industrial Buildings and Associated Activities

| Facility Identification | Description | Activity with Potential to Pollute Storm Water | | | | | | | | |
|-------------------------|---|--|--------------------------|--|--|---------------------------------------|--------------------------------|-----------------|--------------|---------------------------------|
| | | Fueling/ De-fueling | Liquid Storage Tanks* | Vehicle, Aircraft, and Equipment Maintenance | Vehicle, Aircraft, and Equipment Washing | Loading and Unloading Materials | Industrial Waste Management | Outdoor Storage | Salt Storage | Sector S Deicing/ Anti-icing |
| JBER-R | | | | | | | | | | |
| 743 | Sand/Salt Storage Facility** | | X | | | X | | X | X | |
| 984 | Document Services Facility | No industrial activities are conducted at this facility. | | | | | | | | |
| 45125, 45133 & 45135 | Hazardous Waste Storage | | | | | X | X | X | | |
| JBER-E | | | | | | | | | | |
| 4314 | Hazardous Waste Storage | | | | | X | X | X | | |
| 6211 | Vehicle/Equipment Maintenance/Wash Facility | | | X | X | X | X | X | | X |
| 7228 | Vehicle/Equipment Maintenance Facility | | | X | X | X | X | X | | |
| 8288 | Vehicle/Equipment Maintenance Facility | | | X | X | X | X | X | | |
| 8319 | Outdoor Vehicle/Equipment Storage | | | | | | | X | | |
| 8549/8574 | Vehicle/Equipment Maintenance Facility | | | | X | X | | X | | |
| 8681 | Maintenance Hangar | | X | X | | X | X | | | |
| 8691 | F-22 Engine Shop | | | X | X | X | X | | | |
| 9311 | Maintenance Hangar | | | X | X | X | X | | | |
| 9361 | Vehicle/Equipment Maintenance Facility | X | X | X | X | X | X | X | | |
| 9561 | Hush House | | X | X | | X | X | | | |
| 9563 | Hush House | | X | X | | X | X | | | |
| 9684 | Maintenance Hangar | X | | | | | | | | |
| 9694 | Maintenance Hangar | | | X | X | X | X | | | |
| 9696 | Maintenance Hangar | | X | X | X | X | X | X | | |
| 10286 | Maintenance Hangar | X | | X | | X | X | | | |

| Facility Identification | Description | Activity with Potential to Pollute Storm Water | | | | | | | | |
|-------------------------|--------------------------------------|--|--------------------------|--|--|---------------------------------------|--------------------------------|-----------------|--------------|---------------------------------|
| | | Fueling/ De-fueling | Liquid Storage Tanks* | Vehicle, Aircraft, and Equipment Maintenance | Vehicle, Aircraft, and Equipment Washing | Loading and Unloading Materials | Industrial Waste Management | Outdoor Storage | Salt Storage | Sector S Deicing/ Anti-icing |
| 10550 | Sand/Urea Storage Facility** | | | | | X | | | X | |
| 10555 | Aircraft Maintenance Facility | | | X | | X | X | | | |
| 10565 | Aircraft Component Storage Facility | | X | | | | | | | |
| 10567 | Aircraft Component Storage Facility | | X | | | | | | | |
| 10571 | Maintenance Hangar | | | X | X | X | X | | | |
| 10682 | Maintenance Hangar | X | | X | | | | | | |
| 10694 | Equipment Storage Facility | X | X | X | X | X | X | X | | |
| 11519 | Equipment Storage Facility | | | | | X | | | | |
| 11523 | Equipment Storage Facility | | | | | X | | | | |
| 11525 | Maintenance Hangar | X | X | X | | X | | | | |
| 11551 | Maintenance Hangar | X | X | X | X | X | X | | | |
| 11567 | Fuel Farm and Service Station | X | X | | | | | X | | |
| 11583 | Fuel Farm | X | X | | | | | | | |
| 11735 | Hazardous Waste Transfer Facility | | | | | X | X | | | |
| 13196 | Pump House | X | X | | | | | | | |
| 14313 | Deicer Storage and Transfer Facility | | X | | | | | | | |
| 14410 | Maintenance Hangar | X | X | X | X | X | X | | | |
| 14415 | Equipment Maintenance Facility | | | X | X | X | X | X | | |
| 14416 | Fueling Facility | X | | | | | | | | |
| 15365 | Pump House | | X | | | | | | | |
| 15380 | Freight Terminal | X | X | X | X | X | X | | | |
| 15455 | Maintenance Hangar | X | X | X | X | X | X | X | | |
| 15658 | Maintenance Hangar | X | X | | | X | X | X | | |
| 15699 | Fuel Farm | X | X | | | | | | | |

| Facility Identification | Description | Activity with Potential to Pollute Storm Water | | | | | | | | |
|--|---------------------------------|--|--------------------------|--|--|---------------------------------------|--------------------------------|-----------------|--------------|---------------------------------|
| | | Fueling/ De-fueling | Liquid Storage Tanks* | Vehicle, Aircraft, and Equipment Maintenance | Vehicle, Aircraft, and Equipment Washing | Loading and Unloading Materials | Industrial Waste Management | Outdoor Storage | Salt Storage | Sector S Deicing/ Anti-icing |
| 16385 | Pump House | X | X | | | | | | | |
| 16430 | Maintenance Hangar | X | X | X | X | X | X | X | | |
| 16456 | Maintenance Hangar | X | | X | X | X | X | X | | |
| 16468 | Maintenance Hangar | | | X | X | X | X | | | |
| 16521 | Maintenance Hangar | X | | X | | X | X | X | | |
| 16670 | Maintenance Hangar | | X | | | X | | | | |
| 16675 | Storage Facility | X | | X | X | X | | | | |
| 16710 | Fueling Facility | X | X | | | | X | | | |
| 16716 | Maintenance Hangar | X | X | X | X | X | X | X | | |
| 17470 | Maintenance Hangar | | | X | X | X | X | | | |
| 17494 | Storage Facility | | | | | X | | | | |
| 17508 | Maintenance Hangar | X | X | X | X | X | X | X | | |
| 17660 | Maintenance Hangar | X | | | | X | | X | | |
| 18471 | Pump House | X | X | | | | | | | |
| 29453 | Airfield Fueling Point | X | X | | | | | | | |
| JBER-E Airfield | Airstrip, Taxiways, and Tarmacs | X | X | X | X | X | | X | | X |
| Notes: * MSGP Part 5.1.2 requires all liquid storage tanks exposed to precipitation be mapped; for consistency, they are included in this table. ** Salt storage alone is not considered an industrial activity, however, industrial facilities with salt storage activities must meet the requirements in MSGP Part 2.1.2.7. | | | | | | | | | | |

Figure 7. Location of Airfields

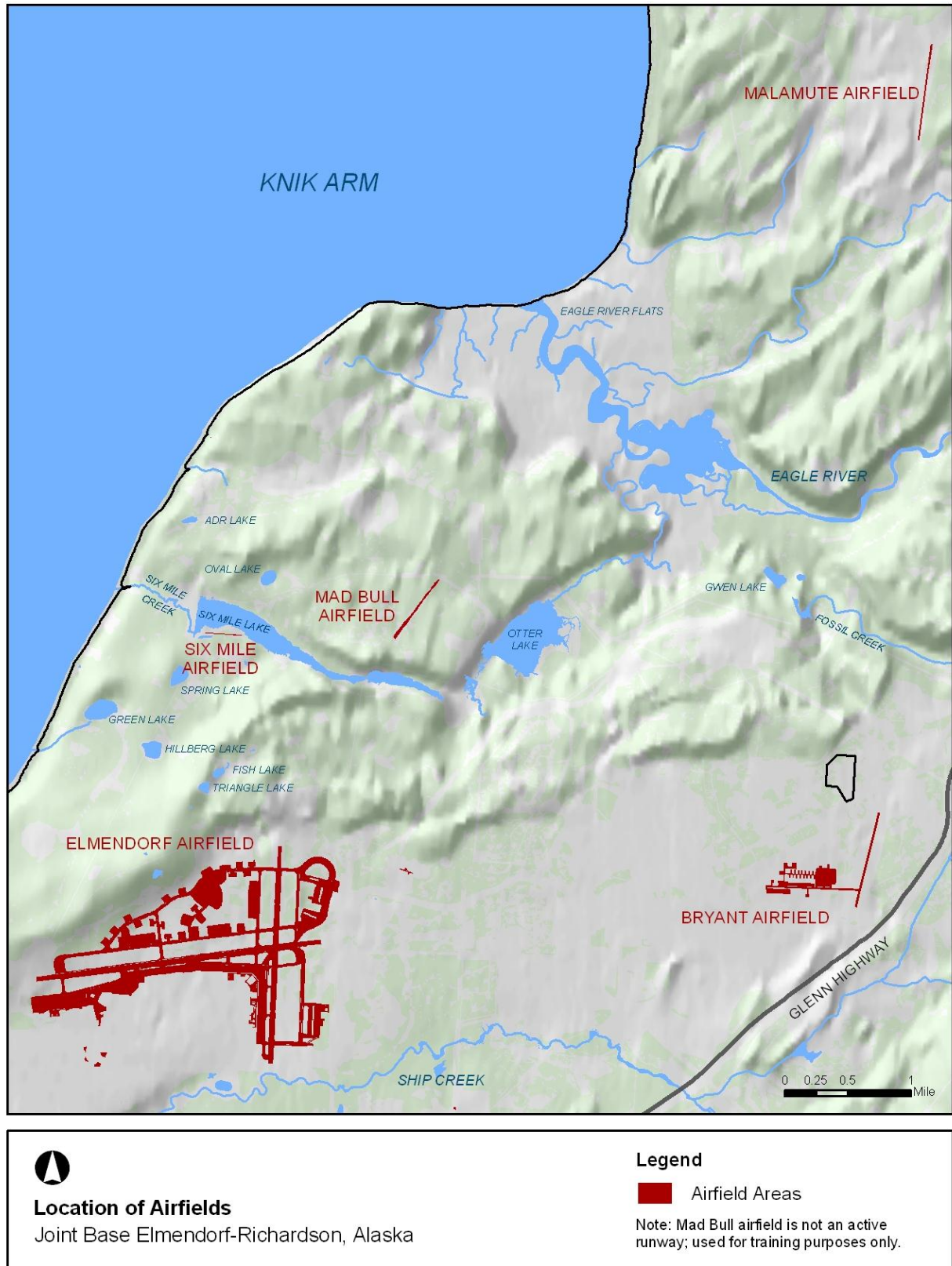
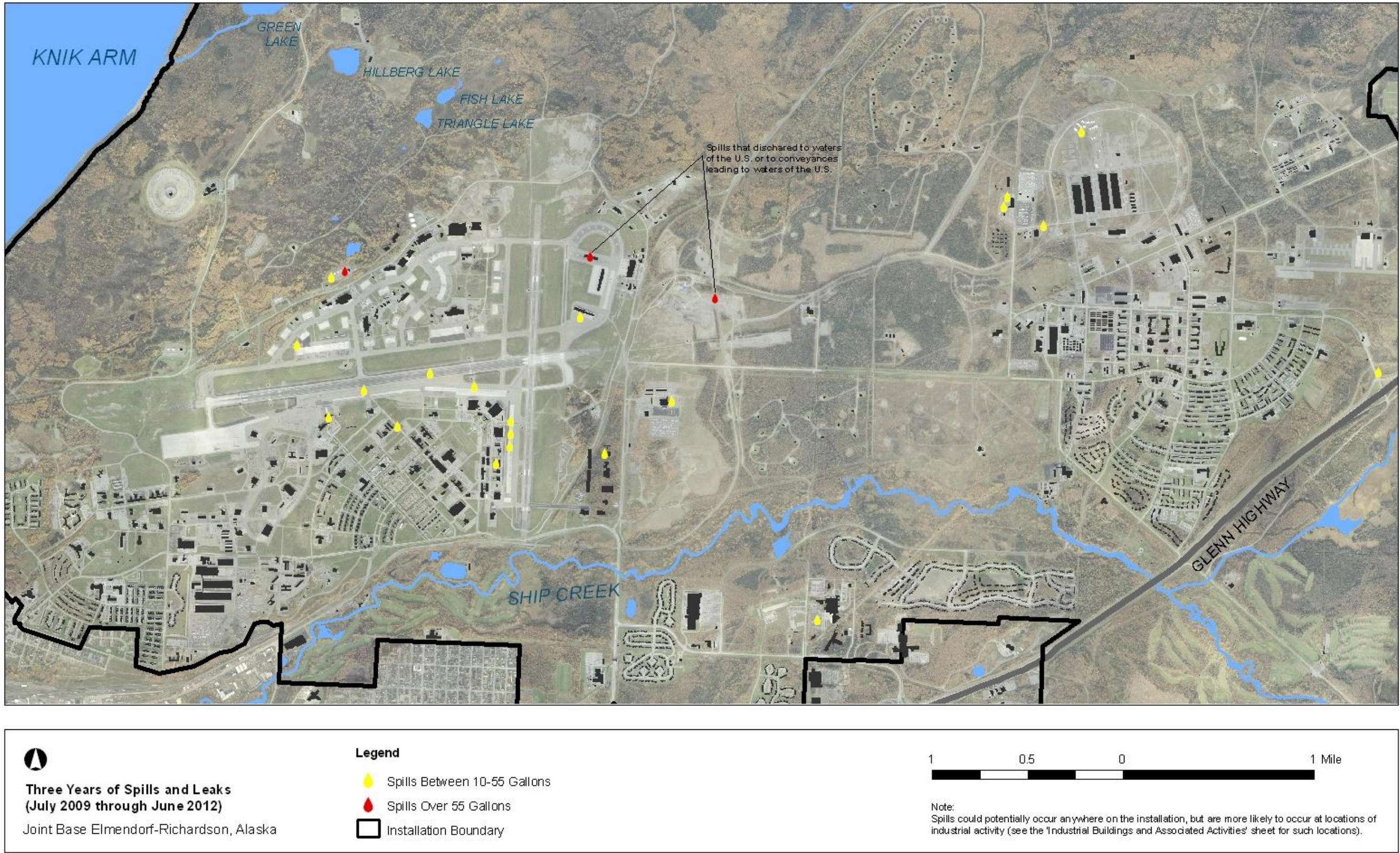


Figure 8. Three Years of Spills and Leaks



4.0 BASIC STORM WATER CONTROL MEASURES

Part 5.1.4 of the MSGP requires permittees to document in the SWPPP the types and locations of control measures implemented that address, where applicable, the requirements presented in MSGP Parts 2.1.2, 2.1.3, 2.2 – 2.4, and 8. JBER has implemented a wide-range of storm water BMPs under previous MSGPs to ensure that every reasonable effort is taken to reduce the likelihood of contaminating storm water runoff at the installation. The 2008 MSGP uses the term “control measures” to include both structural measures and non-structural BMPs. The BMPs described in this section address the industrial activities that occur at JBER, and complement and reinforce operating procedures and requirements found in other state, federal, and USAF regulations. The storm water pollution prevention team continuously evaluates the effectiveness of BMPs and modifies them or implements new ones where and when necessary.

There are three main categories of BMPs¹²: 1) basic BMPs, 2) activity-specific BMPs and 3) sector-specific BMPs. This section focuses on basic BMPs. Basic BMPs are those that all industrial facilities at JBER must implement, where applicable and practicable. Activity-specific BMPs are catered to specific activities, such as fuel storage or equipment cleaning, that not all facilities engage in. Sector-specific BMPs address sector-specific components, and must only be followed at facilities that fall under a specific industrial sector. Industrial sectors may have their own required, sector-specific BMPs that are additional to basic BMPs. There is overlap between these types of BMPs, but it is this redundancy that helps ensure compliance at every level of the organization.

To summarize:

- All industrial facilities must follow basic BMPs, where applicable
- Activity-specific BMPs must be followed when engaging in respective activities
- Sector-specific BMPs are respective to an industrial sector

Activity-specific BMPs are detailed in Section 5, and sector-specific BMPs are detailed in Section 6.

Basic BMPs are required at all facilities identified in this plan and are typically operational in nature. Examples of basic BMPs include good housekeeping practices, proper material storage and handling, preventative maintenance, etc. Basic BMPs are very effective, and are typically inexpensive and easy to implement. Therefore, they are used on a large scale and are the

¹² It is important to remember that a BMP is a “best” management practice, and not necessarily a required management practice. BMPs provided in this section are those recommended by the EPA and ADEC; alternative, equivalent measures implemented in lieu of those described in this SWPPP may be acceptable.

responsibility of the installation-wide pollution prevention team. Basic BMPs are the true backbone of storm water pollution prevention at JBER.

The 2008 MSGP requires BMPs be implemented at industrial facilities for the following categories:

- Minimize exposure
- Good housekeeping
- Preventive maintenance
- Spill prevention and response
- Erosion and sediment controls (see management of runoff discussion, Section 4.5)
- Management of runoff
- Salt storage piles or piles containing salt (see Section 5.8)
- Sector-specific non-numeric effluent limits (see Section 6)
- Employee training
- Routine facility inspections (see Section 8)
- Non-storm water discharges
- Waste, garbage, and floatable debris
- Dust generation and vehicle tracking of industrial materials

The *erosion and sediment controls* discussion is incorporated into the *management of runoff* section, as the two topics are so closely related and complementary. Additionally, due to the specificity of the subject matter, *sector-specific non-numeric effluent limits* are addressed in Section 6, which is dedicated to sector-specific requirements.

4.1 Minimize Exposure

The purpose of this SWPPP is to identify and prevent potential contaminants from polluting receiving waters. The following BMPs can reduce the potential for storm water contamination resulting from industrial activities. Bottom line – wherever and whenever practicable, activities are conducted and storage areas are designated in covered, contained areas at JBER. The following BMPs minimize the exposure of contaminants to the storm water drainage system:

- Materials representing a potential source of contamination will be stored indoors when practicable, and contained and covered if outdoors

- All liquid waste must be stored over secondary containment with sufficient volume to hold 110 percent of the largest liquid waste container
- All liquid storage containers sized 55-gallons or larger are required to be stored over secondary containment; smaller containers of HM should also be stored over secondary containment¹³
- All damaged batteries must be separated and stored in a proper protective container or closeable plastic bag¹⁴
- HM stored outdoors must be protected from the elements, located within a contained area (six inch curb or other suitable spill containment) that is graded in a way that diverts spills to one area¹⁵
- Material loading and unloading should occur inside or under cover
- Liquids containers should not be opened prior to arrival at the area of use
- Drip pans¹⁶ should be placed under all parked, tactical vehicles
- Drip pans should catch all leaks and drips, and be properly emptied/replaced as necessary
- Drain and properly dispose of all fluids prior to storing vehicles for cannibalization or disposal
- Facility inspections must emphasize structural integrity of cover and containment components.

4.2 Good Housekeeping

Good housekeeping encompasses a wide spectrum of practices at JBER that are implemented at individual facilities as well as by installation-wide maintenance personnel. At the facility level, maintaining clean surfaces and preventing spills, leaks, and drips from contaminating runoff is the cornerstone of the storm water pollution prevention program. Installation-wide good housekeeping includes strategic areas for snow stockpiling, regularly scheduled trash pickups and locations, and wet-sweeping paved roads following spring snowmelt and when necessary. The following good housekeeping BMPs have been identified to address potential areas of concern:

¹³ See Section 2.2.3 and 7.8 of the May 2011 JBER OPLAN 19-3 for HM storage requirements.

¹⁴ See Section 4.10 of the May 2011 JBER OPLAN 19-3 for battery storage protocols.

¹⁵ See Section 7.8.h of the May 2011 JBER OPLAN 19-3 for outdoor storage of HM requirements.

¹⁶ Drip pans represent a foreign object damage (FOD) hazard and cannot be used on the flight line.

- All materials should be properly categorized, labeled, stored, and disposed of
- Industrial waste and HM areas must be clearly delineated and labeled
- Domestic trash dumpsters should be widely accessible, labeled, and maintained with doors and lids closed when not in use
- Industrial activities should occur only in approved, designated areas
- Methods approved by 673 CES/CEAN should be employed for the storage and handling of all materials
- Less toxic/hazardous materials will be used when practicable
- Facilities should be maintained in a clean, orderly fashion
- Snow should be stockpiled on permeable ground, at least 100 feet from storm water conveyances

Additional minimizing exposure and good housekeeping practices and HM/HW handling protocols employed at JBER are detailed in the OPLAN 19-3 and the JBER SPCC/C-Plan.

4.3 Preventive Maintenance

Preventive maintenance of equipment alleviates the potential for leaks and spills. A preventive maintenance program that includes regular inspecting, testing, maintaining, and repairing of all industrial equipment and systems helps avoid situations that may result in leaks, spills, and other releases. These activities can greatly reduce breakdowns or failures that could result in the discharge of pollutants to surface waters.

JBER's SPCC/C-Plan describes the multi-faceted program for performing inspections and monitoring of the fuel pipeline system, pump houses, fillstands, and large POL storage tanks, including ASTs and USTs. Regular inspections are performed to identify any maintenance or other issues that may result in a discharge. Because this information is detailed in the SPCC/C-Plan it is not duplicated in this document. A copy of the SPCC/C-Plan is maintained with this SWPPP.

JBER's operations and maintenance schedule includes regular servicing of OWSs. Preventive maintenance ensures proper functioning of pumps, floats, and switches and, if necessary, cleaning in-line filters and sediment traps. Additional, less frequent maintenance includes vacuuming out separator tanks, sediment trap pits, and oil collection basins and, if necessary, cleaning out petro-pak filter layers. Exterior wash racks and their sediment and collection tanks are winterized in the fall, and remain out of service until spring, when they are de-winterized and prepared for use.

Preventive maintenance at JBER's storm sewer system occurs during the spring, summer, and fall. In the spring, this may include inspecting culverts, storm drain manhole pits, storm drain catch basins and grates, and drainage ditches for obstructions. Obstructed drainage structures are cleaned/repared as soon as practicable. In the fall, culvert end markers are repaired or replaced at culverts, as necessary.

Storm drainage structures are periodically washed, on a rotating schedule, with a high-pressure jet washer. Jet-washing operations clear drainage pipes, manhole pits, catch basins, and culverts of obstructions and accumulated silt.

A combination of scheduled and on-call maintenance accompanied by routine inspections is expected to address preventive maintenance concerns on the installation. Appendix G has been reserved for records of maintenance and repairs to storm water control measures including structural BMPs.

4.4 Spill Prevention and Response

The bulk of spill prevention and response requirements at JBER can be found in the OPLAN 19-3 and SPCC/C-Plan. The OPLAN 19-3 details all HM/HW handling, use, and storage protocols at JBER, and complies with Air Force Environmental Management System (EMS) requirements. The SPCC/C-Plan was prepared in accordance with 40 CFR 112 (Oil Pollution Prevention) and Title 18, Alaska Administrative Code (AAC), Part 75 (Oil and Other Hazardous Substances Pollution Control), which regulate the storage, handling, and dispensing of POLs.

OPLAN 19-3 protocols help ensure all HM/HW are handled and stored in a manner that reduces the opportunity for stored materials to become exposed to storm water. The protocols include key storm water BMPs such as good housekeeping and minimizing exposure. For example, all containers must be clearly labeled and have tight-fitting lids; all liquids stored in 55-gallon containers or larger must be stored with secondary containment and protected from weather. Management practices in OPLAN 19-3 that mirror or compliment storm water BMPs are not duplicated in this SWPPP.

The SPCC/C-Plan describes methods in use at JBER to prevent potential spills from reaching waters of the U.S. The plan includes spill prevention, discovery, and emergency notification procedures, along with POL handling/dispensing, inspection, testing, and maintenance procedures. Spill response strategies, recovery strategies, and protocols for the disposal of contaminated materials are detailed in the SPCC/C-Plan and are not duplicated in this SWPPP. The SPCC/C-Plan must be reviewed, and if necessary, amended by 673 CES/CEAN at least once every five years. The plan is maintained by 673 CES/CEAN and copies are provided to the JBER FES, and fueling and fuel maintenance flights.

4.5 Management of Runoff

4.5.1 Erosion and Sediment Controls

Because JBER is situated on land with relatively flat topography, erosion is generally not an issue on the installation. Much of the installation is vegetated and permeable, allowing storm water to infiltrate. Paved areas include roads, facility parking areas, and airfield runways and ramps. Vegetated buffers such as grassy strips, swales, and ditches receive runoff around facility perimeters and from paved areas. Non-permeable surfaces on the installation direct runoff to the engineered, below-grade storm sewer system.

Significant relief in the Chugach Mountains east of the main cantonment area influences flow velocity in Ship Creek, which runs through the installation. The greatest threat of erosion would likely result from natural causes such as larger-than-normal storms or snowmelt events. The banks of Ship Creek are forested and generally undisturbed by activities at JBER. Thus, JBER is not prone to erosive conditions.

All construction activities at JBER greater than one acre are required to have coverage under an APDES construction storm water permit (see Section 1.2.3). These projects must include the development and implementation of an Erosion and Sediment Control Plan, which is submitted to 673 CES/CEAN for approval before construction activity is authorized to begin. This requirement also applies to any tree clearing and grubbing operations. 673 CES/CEAN oversees these projects to ensure all required and appropriate BMPs are being properly implemented. Regular inspections by 673 CES/CEAN staff as well as construction project coordinators identify and correct potential BMP deficiencies to ensure that runoff from these sites is uncontaminated and free of sediment.

Additional to ongoing preventive maintenance of the storm sewer system discussed in Section 4.3, proper grade of permeable ground and culverts is maintained for desired flow and settling ability of the ditches and swales. Due to the length of the storm sewer system and the distance of most industrial facilities from Ship Creek and Knik Arm, there is often ample opportunity to intercept potential spills prior to contaminants reaching the creek.

Storm water coordinators are instructed during annual storm water training to regularly inspect facility grounds for erosion and to report problems to 673 CES/CEAN if they occur. The 2008 MSGP requires quarterly inspections, which include sediment and erosion criteria. During CSCE inspections, storm drainage features are evaluated for their condition and effectiveness. 673 CES/CEAN maintains records of these inspections and associated corrective actions with this SWPPP.

4.5.2 Snow Management

Most of the snow that is collected throughout the winter comes from roads, parking areas, and storage yards. Snow is stockpiled at dedicated locations on the installation. While personnel at

some facilities plow their own yards and parking areas, it is less common. Snow stockpile locations at JBER are on permeable ground, at least 100 feet from a storm water conveyance whenever practicable.

The following snow stockpiling BMPs are implemented at JBER when practicable:

- Locate stockpile perimeters a minimum of 100 feet from a storm water conveyance or water body
- Stockpile snow on permeable ground
- Regularly assess stockpile locations during break-up to ensure that contaminated melt water is not reaching water bodies or conveyances
- Collect trash that melts out of snow piles as soon as is practicable to prevent its escape from the site
- Ensure that runoff from melting stockpiles is not contributing to erosion

4.6 MSGP Training Requirements

Part 2.1.2.9 of the 2008 MSGP requires training for the storm water pollution prevention team as well as personnel that are responsible for implementation of, and compliance with provisions of the permit. ADEC recommends administering this training annually at a minimum, and more frequently at facilities with high turnover of personnel. Facility storm water coordinators and/or UECs at JBER receive annual storm water pollution prevention training that covers the components and goals of the SWPPP, basic BMPs described in this section, sector-specific BMPs and activity-specific BMPs that must be implemented at facilities, and the responsibilities of facility personnel required by the MSGP and SWPPP. Special attention is paid to activities and pollutants associated with different facility operations and how to avoid their contamination of storm water. The Water Program Manager maintains in-house training materials for new personnel and those not available during the formal training sessions. All personnel who work in areas where industrial materials or activities are exposed to storm water or are responsible for implementing activities identified in this SWPPP are encouraged to participate in storm water training.

As required by the MSGP, 673 CES/CEAN maintains annual storm water training documentation with this SWPPP.

4.7 Non-Storm Water Discharges

The 2008 MSGP states, "You [permittee] must eliminate all non-storm water discharges not authorized by an NPDES permit." The MSGP authorizes uncontaminated storm water discharges from industrial facilities, when complying with terms of the permit. The MSGP also identifies the following allowable non-storm water discharges from permitted facilities:

- Discharges from fire-fighting activities
- Fire hydrant flushing
- Potable water, including water line flushing
- Uncontaminated condensate from air conditioners, coolers, and other compressors and from the outdoor storage of refrigerated gases or liquids
- Irrigation drainage
- Landscape watering provided all pesticides, herbicides, and fertilizer have been applied in accordance with the approved labeling
- Pavement wash waters where no detergents are used and no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed)
- Routine external building wash-down that does not use detergents
- Uncontaminated ground water or spring water
- Foundation or footing drains where flows are not contaminated with process materials
- Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but not intentional discharges from the cooling tower (e.g., “piped” cooling tower blow-down or drains)

Although the above discharges are not subject to APDES industrial storm water permitting requirements, appropriate measures must be implemented to prevent pollutants from entering the storm water drainage system, resulting from any discharges (see Section 9.3).

4.8 Waste, Garbage, and Floatable Debris

The MSGP states that the permittee must ensure that waste, garbage, and floatable debris are not discharged to receiving waters by keeping exposed areas free of such materials or by intercepting them before they are discharged.

The highest potential for waste, garbage, or floatable debris to enter receiving waters at JBER most likely occurs at snow stockpiling areas, where snow is stored after plowing. This is due to the large volume of melting water, and the fact that trash is not visible until it melts out of the pile. This threat would only likely exist if the stockpile areas were ill placed. Facility personnel are instructed as necessary during quarterly inspections to keep lids on their dumpsters when not in use.

Most industrial activities on the installation are typically conducted indoors and at a significant distance from waters of the U.S. Quarterly inspections of these sites and their surrounding areas help ensure good housekeeping measures such as trash removal and proper waste

disposal are occurring. Garbage cans and/or dumpsters at industrial facilities are regularly emptied. Spring-cleaning occurs at industrial facilities to ensure that any garbage or debris uncovered by snowmelt is removed efficiently and properly disposed of.

The following BMPs are implemented where practicable at industrial facilities at JBER to ensure that garbage and debris do not enter receiving waters.

- Provide dedicated, clearly marked, containers or dumpsters for disposal of garbage
- Place trash receptacles in convenient locations
- Keep containers protected from weather so that containers are not blown over during wind events or filled with snow or rain
- Empty containers on a regular basis
- Regularly inspect site to ensure that loose trash is picked up and disposed of properly
- Conduct thorough spring-cleaning after snow melt
- Remove and properly dispose of all trash and garbage from grounds, snow stockpiles, parking areas and roadways
- Follow BMPs for proper disposal of hazardous waste and materials

4.9 Dust Generation and Vehicle Tracking of Industrial Material

Dust controls and reduction of off-site tracking are required by the MSGP, and include any controls that reduce the potential for dust, sediment and other potential contaminants to be carried through air, water, or as off-site tracking. JBER has a policy of regularly sweeping paved streets and parking areas to minimize dust and to prevent sediment from being discharged into the storm drain system. Applicable contractors and/or maintenance personnel address excessive sediment, mud, and other contaminants on installation roads as necessary.

5.0 ACTIVITY-SPECIFIC CONTROL MEASURES

The MSGP requires permittees to describe in their SWPPP the control measures implemented to address the activities conducted at their facilities with potential to contaminate storm water. BMPs highlighted in this section address activities that regularly occur at various industrial facilities at JBER. All personnel engaging in these activities on the installation must comply with these, or equivalent measures, as applicable.

The principal activities at JBER that represent the potential to impact storm water are:

- Fueling and fuel storage
- Vehicle, aircraft, and equipment maintenance
- Vehicle, aircraft, and equipment washing
- Loading and unloading materials
- Deicing/anti-icing
- Management of HM/HW accumulation
- Outdoor storage
- Salt storage

The activity-specific control measures below compliment the basic control measures discussed in Section 4 of this SWPPP and the sector-specific control measures in Section 6¹⁷.

5.1 Fueling and Fuel Storage BMPs

Fueling activities at JBER include small volume fuel transfer and bulk fuel transfer. Small volume fuel transfer includes fueling vehicles, equipment, and aircraft at fixed fuel points, as well as to/from portable sources such as fuel trucks, bowzers, and hand-held containers. Bulk fuel is transferred to ASTs and USTs via delivery fuel trucks and fixed piping. The JBER SPCC/C-Plan describes the management of fuel storage and transfer on the installation, contingency planning and response strategies, and training requirements for fuel handler personnel. 673 CES/CEAN maintains the SPCC/C-Plan with this SWPPP, and copies are provided to the JBER FES and fueling and fuel maintenance flights. Detailed information on all major aspects of the JBER fueling program are included in the SPCC/C-Plan and are not

¹⁷ Multiple sector-specific requirements in Part 8 of the MSGP that JBER must address are satisfied by implementing BMPs presented in this SWPPP section, or equivalent measures.

reproduced in this SWPPP. Fueling activities and the sections where they are addressed in the 2012 SPCC/C-Plan are provided below.

- Fuel transfer procedures – SPCC/C-Plan Section 2.1.4
- POL storage (in ASTs, USTs, and mobile containers) – SPCC/C-Plan Section 2.2
- Spill prevention measures (including secondary containment, overfill protection, discharge protection, corrosion protection, inspections and monitoring, and maintenance) – SPCC/C-Plan Section 2.3
- Additional discharge prevention measures (regarding generators/engines, fuel piping, fillstands and racks, and mobile fueling vehicles/containers) – SPCC/C-Plan Section 2.4

5.1.1 Spill Prevention and Response

Detailed information on spill prevention and response strategies at JBER are included in the SPCC/C-Plan and are not reproduced in this SWPPP. Spill prevention and response activities and the sections where they are addressed in the 2012 SPCC/C-Plan are provided below.

- Spill/discharge prevention – SPCC/C-Plan Section 2
- Spill prevention measures – SPCC/C-Plan Section 2.3
- Response planning standard – SPCC/C-Plan Section 5

5.2 Vehicle, Aircraft, and Equipment Maintenance BMPs

Vehicle, equipment, and aircraft maintenance activities at JBER are conducted indoors, in designated places whenever practicable. Designated maintenance areas have non-permeable surfaces that drain to OWSs or a water recycling system prior to discharging to the sanitary sewer. Drip pans are placed beneath leaking vehicles/equipment outdoors awaiting maintenance to catch all leaks/drips from reaching the ground. Occasional aircraft maintenance occurs on the flight line as mission dictates. When maintenance must occur outdoors, proper BMPs are observed to minimize potential contamination of surface run-on and runoff (see bulleted list below).

During maintenance activities, drip pans are used whenever possible to help keep surfaces clean and help to prevent off-site tracking of contaminants. Personnel at JBER receive training for HM/HW handling and spill prevention and response as outlined in Chapter 5 of the OPLAN 19-3. Stocked spill kits are accessible during maintenance activities. Spills are promptly addressed using dry cleanup methods.

The following list summarizes activity-specific BMPs for vehicle, equipment, and aircraft maintenance activities at JBER industrial facilities:

- Store vehicles/equipment/aircraft awaiting maintenance indoors or under cover when practicable
- Promptly address spills/drips/leaks with dry cleanup methods to prevent off-site tracking of contaminants
- Maintain an organized inventory of materials and limit quantity stored based on need
- Properly dispose of all fluids prior to vehicle/equipment or parts disposal
- Conduct maintenance in designated areas
- Obtain and use drain mats to cover drains in the event of a spill
- Store cracked or damaged batteries in leak-proof secondary containers
- Regularly inspect structural BMPs (i.e., curbing, awnings, sediment traps, etc.) for proper function and structural integrity

In the event that maintenance must occur outdoors, the following BMPs are implemented when practicable¹⁸:

- Place absorbent material or non-permeable, bermed liners below work areas
- Use drip pans prior to, and during maintenance, and after if necessary
- Do not conduct work where spilled or leaked materials could easily enter the storm water drainage system (i.e., near drains, culverts, ditches, etc.) unless necessary
- Properly dispose of all materials generated during maintenance
- Following maintenance, ensure ground surfaces are uncontaminated; properly address to clean permeable surfaces or collect and dispose of contaminated dirt and gravel when necessary
- Follow USAF procedures for aircraft engine flushing

5.3 Vehicle, Aircraft, and Equipment Washing BMPs

The following list summarizes activity-specific BMPs for vehicle, aircraft, and equipment washing activities at JBER industrial facilities:

- Wash only in designated facilities/areas
- Only use approved soaps over drains leading to an OWS

¹⁸ FOD can prevent use of drip pans, absorbent pads, etc. during active maintenance on parts of the airfield facility.

- Prevent wash water from entering the storm water drainage system
- Do not dispose of any materials or waste down wash rack drains
- Liquid HM containers stored in unused wash bays must have secondary containment
- Regularly inspect containment features, traps, sumps, drains, etc., for proper function and address as necessary

5.4 Loading and Unloading BMPs

The following list summarizes activity-specific BMPs for loading and unloading materials at JBER industrial facilities:

- Load/unload materials inside or under covered areas whenever practicable
- Handle new chemical containers unopened until they are at the area of use
- If already opened, ensure container lids are tightly secured prior to transporting
- Have a spill kit easily accessible when handling liquids
- Do not load/unload liquid materials over storm drains unless necessary; if necessary, cover and boom around drains prior to activity
- Manage traffic accordingly during loading/unloading activities to reduce the chance of an accident
- Follow all material handling procedures in the OPLAN 19-3

5.5 Deicing/Anti-Icing BMPs

There are two general deicing and anti-icing activities conducted at JBER: deicing and anti-icing of aircraft, and deicing and anti-icing of ground surfaces. Storm water runoff from the road system for ground vehicles on the installation is managed under the JBER SWMP. Deicing and anti-icing of aircraft and “airside”¹⁹ ground surfaces are discussed below. Sector S requirements for deicing and anti-icing are presented in Section 6.1.3.6 of this SWPPP.

Two products are generally used at JBER for deicing and anti-icing of aircraft: AMS 1424, Type I Deicing Defrosting Fluid for deicing, and AMS 1428, Type IV Anti-icing Fluid for anti-icing. AMS 1424, Type I Deicing Defrosting Fluid is applied to aircraft by a nozzle mounted on the boom of a deicer truck dispatched to the aircraft. Advanced nozzles are used that increase air pressure in the mixture, which in turn reduces the amount of product required for deicing

¹⁹ “Airside” is defined in 40 CFR Part 449 as: “the part of an airport directly involved in the arrival and departure of aircraft, including runways, taxiways, aprons, and ramps.”

aircraft. The glycol/water solution is a preset mixture adjusted according to ambient temperature, with the average being 60% glycol and 40% water.

AMS 1428, Type IV Anti-icing Fluid, is used to prevent ice from forming on aircraft. The fluid is applied in the same manner as the defrosting fluid, from an on-site boom truck, and utilizes the same nozzle technology described above, thus minimizing the amount of necessary fluid. Unlike the defrosting fluid, AMS 1428, Type IV Anti-icing Fluid is not diluted prior to application.

Airside pavement at the JBER-E Airfield receives direct application of potassium acetate and sodium acetate for anti-icing purposes. Runway sensors provide data on surface temperatures, subsurface temperature, icing conditions, and depth of ice. This data is considered with planned use of the respective runways to determine dosage requirements for anti-icing agents, minimizing the likelihood of over application. The fluids are then applied from vehicles with computer metered application equipment. Because repeated applications of potassium acetate creates a slick surface, airfield sand is periodically applied to counteract that effect.

Applied pavement anti-icing materials are not collected. A portion of the deicing fluid that is applied to aircraft evaporates after application. The remaining fluid drips to the runway or parking ramp. Spent deicing/anti-icing fluids that reach the asphalt or pavement either evaporate or are diluted with water from melted snow and generally flow to surrounding grassy swales. Except for the far west side of the flight line and along the north side of the east/west runway, there are no storm drain catch basins or culverts along the flight line. Runoff at the JBER-E Airfield is directed to JBER-E Outfall 1. Prior to reaching this outfall and subsequently discharging to the Knik Arm, runoff must travel a significant distance, through culverts and vegetated ditches, until being discharged to a large, grassy swale on Cherry Hill, above the outfall. It is expected that most deicing fluid residue will not reach the outfall. Benchmark monitoring of deicing parameters required by the MSGP will provide data that JBER can use to assess whether further BMPs for deicing/anti-icing activities are necessary.

Table 3-1 of the 2012 JBER SPCC/C-Plan lists the size and locations of deicing/anti-icing fluid storage tanks used for Sector S activities at JBER-E Airfield.

5.6 HM/HW Accumulation Area BMPs

673 CES/CEAN operates the TSDF on the installation. Regulated waste at industrial facilities accumulates at approved accumulation areas before being brought to the TSDF by the waste turn-in contractor. Requirements for HM/HW accumulation and handling at JBER are strictly dictated by the Resource Conservation and Recovery Act (RCRA) and OPLAN 19-3, and are therefore not duplicated in this SWPPP. The proper management of HM/HW at JBER under the RCRA and OPLAN 19-3 programs prevents exposure of HM/HW to weather and run-on/runoff.

5.7 Outdoor Storage BMPs

The following list summarizes activity-specific BMPs for outdoor storage activities at JBER industrial facilities:

- Materials stored outdoors must be out of contact with run-on and runoff, and covered from weather
- Liquids (even non-hazardous) stored outdoors should have secondary containment
- Store materials away from high traffic areas and/or consider creating a barrier between these areas

The following BMPs for storing tactical vehicles, equipment, and aircraft are implemented when practicable at JBER:

- Store vehicles, equipment, and aircraft indoors or under cover whenever possible
- Drip pans should be placed and maintained under leaking tactical vehicles, equipment, and aircraft²⁰
- Drip pans should be positioned to catch leaks and drips, and be properly emptied/replaced as necessary
- Cover oily parts or those containing chemical residue from weather
- Empty and properly dispose of all fluids prior to vehicle/equipment disposal
- Maintain leaky vehicles/equipment/aircraft prior to long-term storage
- Regularly inspect vehicle, equipment, and aircraft storage areas for leaks and promptly address as necessary

5.8 Salt Storage BMPs

Part 2.1.2.7 of the MSGP states the following: “You [permittee] must enclose or cover storage piles of salt, or piles containing salt, used for deicing or other commercial or industrial purposes, including maintenance of paved surfaces. You must implement appropriate measures (e.g., good housekeeping, diversions, containment) to minimize exposure resulting from adding to or removing materials from the pile.”

Building 10550 is the sand storage facility at JBER-E. A mixture of road salt and sand is staged inside a bay that is open on one end, allowing equipment to mix the materials as well as load/unload. A small bay on the side of the building stores cold batch asphalt for minor, as-

²⁰ Do not use drip pans where FOD is a concern.

needed road repairs. Curbing between the street and building entrance prevents run-on from entering the bays.

Building 743 is the sand storage facility at JBER-R. The building has two full walls, a roof, and large openings on the end walls for equipment to enter and exit. Inside the building is a large pile of gravel mixed with magnesium chloride, which is spread on roads when they are slippery. Spreading only occurs as necessary. Site grading does not allow run-on from entering the building. An above ground poly-tank is set atop a concrete pedestal near the northwest corner of the west building entrance. The poly-tank has roughly 1,000 gallons of capacity and is labeled "MgCl Liquid." A ball valve and hose connect to the side of the tank. This facility is surrounded by permeable areas and offers little opportunity for runoff to transport residual or spilled material to the JBER MS4.

Both salt/sand storage facilities at JBER are represented on Figure 6.

6.0 SECTOR-SPECIFIC CONTROL MEASURES

Part 2.1.2.8 of the MSGP states, “You [permittee] must achieve any additional non-numeric limits stipulated in the relevant sector-specific section(s) of Part 8.” Part 8 of the MSGP details requirements that are specifically catered to address activities and potential pollutants commonly associated with each industrial sector.

JBER facilities meeting the definition of “industrial” in 40 CFR 122.26(b)(14)(i-xi) fall under four industrial sectors: Sector J (Non-Metallic Mineral Mining and Dressing), Sector K (Hazardous Waste Treatment, Storage, or Disposal Facilities), Sector S (Air Transportation), and Sector X (Printing and Publishing). Industrial facilities at JBER and the activities that occur at them are presented in Table 4.

Preceding sections in this SWPPP discuss requirements that are generally applicable to all facilities at JBER covered by the MSGP. Sector-specific requirements are in addition to requirements specified elsewhere in this SWPPP and apply to the areas of the facility where activities identified in the MSGP occur. Sector-specific limits and requirements are discussed in the following sections. Included are BMPs that ADEC requires for activities and areas that are typically present at facilities under respective sectors. In many cases, these sector-specific BMPs complement the basic BMPs described in Section 4, and activity-specific BMPs in Section 5. Requirements in this section must be implemented as applicable.

The MSGP provides a conditional waiver from permit coverage for industrial facilities where storm water discharges do not have the potential to enter waters of the U.S. or conveyances that lead to waters of the U.S. Industrial facilities that meet the No Exposure criteria of 40 CFR 122.26(g) may submit certification for No Exposure to ADEC for regulatory approval. It is JBER’s position that No Exposure applies to all Sector J activities, certain Sector S facilities, and the Sector X facility on the installation. No Exposure is discussed in detail in Section 6.3 of this SWPPP.

Sector-specific requirements of the MSGP have less flexibility than other parts of the permit. To avoid rephrasing lengthy portions of the permit, and to ensure the inclusion and accuracy of specific permit provisions, much of the language in this section was taken directly from Part 8 of the 2008 MSGP. This includes passages that state sector-specific information that must be presented in the permittee’s SWPPP (i.e., this document). Some of the language has been slightly adapted for applicability to JBER.

6.1 Sector S – Air Transportation

The sector-specific control measures in this section apply to storm water discharges associated with industrial activity from air transportation facilities identified by the SIC codes specified under Sector S in Table D-1 of Appendix D of the 2008 MSGP. Those SICs codes are 4512 through 4581, which comprise major SIC group 45. This major SIC group includes “establishments

engaged in furnishing domestic and foreign transportation by air and also those operating airports and flying fields and furnishing terminal services.”

6.1.1 Sector S at JBER

JBER-E Airfield, including all runways, taxiways, and tarmacs adjacent to hangars and maintenance facilities near the airfield, is a Sector S facility. Deicing/anti-icing of aircraft and anti-icing of airside pavement occurs in multiple locations at the JBER-E Airfield. The majority of other Sector S facilities at JBER are maintenance and fueling facilities where activities may include vehicle, equipment, and aircraft fueling, maintenance, and washing, industrial waste management, loading and unloading of materials, outdoor storage, and POL storage in ASTs and USTs. Most Sector S facilities at JBER that are managed by this SWPPP are immediately adjacent to the JBER-E Airfield, though a few are elsewhere on the installation. Examples include locations where fuel trucks are staged when not actively fueling, and the airstrip at Six Mile Lake, north of the JBER-E Airfield. Sector S facilities at JBER are presented on Figure 6. Table 4 presents a list of these facilities and activities conducted at them.

Sector S activities and associated pollutants are discussed in Section 3 of this SWPPP. Sector-specific requirements for Sector S facilities are discussed below.

6.1.2 Limitation on Coverage and Prohibition of Non-Storm Water Discharges

Storm water discharges from those portions of the air transportation facilities that are involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, or deicing operations must obtain industrial storm water permit coverage. The MSGP provides that coverage. The term “deicing,” where used in the MSGP, refers to both deicing (removing frost, snow, or ice) and anti-icing (preventing accumulation of frost, snow, or ice) activities, unless specific mention is made regarding anti-icing and/or deicing activities.

The MSGP does not authorize the discharge of aircraft, ground vehicle, runway, and equipment wash waters; nor the dry weather discharge of deicing chemicals. Such discharges must be covered by a separate APDES permit²¹.

6.1.3 Sector-Specific BMPs

6.1.3.1 Aircraft, Ground Vehicle, and Equipment Maintenance Areas

Minimize the contamination of storm water runoff from all areas used for aircraft, ground vehicle, and equipment maintenance (including the maintenance conducted on the terminal apron and in dedicated hangers). Consider the following practices (or their equivalents): performing

²¹ A discharge resulting from snowmelt is not considered a dry weather discharge.

maintenance activities indoors; maintaining an organized inventory of material used in the maintenance areas; draining all parts of fluids prior to disposal; prohibiting the practice of hosing down the apron or hanger floor; using dry cleanup methods; and collecting the storm water runoff from the maintenance area and providing treatment or recycling.

Activity-specific BMPs for vehicle, aircraft, and equipment maintenance activities at JBER are discussed in Section 5.2 of this SWPPP.

6.1.3.2 Aircraft, Ground Vehicle, and Equipment Cleaning Areas

Clearly demarcate these areas on the ground using signage or other appropriate means. Minimize the contamination of storm water runoff from cleaning areas.

Activity-specific BMPs for vehicle, aircraft, and equipment cleaning activities at JBER are discussed in Section 5.3 of this SWPPP.

6.1.3.3 Aircraft, Ground Vehicle, and Equipment Storage Areas

Store all aircraft, ground vehicles, and equipment awaiting maintenance in designated areas only and minimize the contamination of storm water runoff from these storage areas. Consider the following control measures, including any BMPs (or their equivalents): storing aircraft and ground vehicles indoors, using drip pans for the collection of fluid leaks, and perimeter drains, dikes or berms surrounding the storage areas.

Activity-specific BMPs for aircraft, vehicle, and equipment storage at JBER are discussed in Section 5.7 of this SWPPP.

6.1.3.4 Material Storage Areas

Maintain vessels of stored materials (e.g., used oils, hydraulic fluids, spent solvents, and waste aircraft fuel) in good condition, to prevent or minimize contamination of storm water. Also, plainly label the vessels (e.g., “used oil,” “Contaminated Jet A,” etc.). Minimize contamination of precipitation/runoff from these areas. Consider the following control measures (or their equivalents): storing materials indoors, storing waste materials in a centralized location, and installing berms/dikes around storage areas.

BMPs for material storage areas at JBER are discussed in multiple sections of this SWPPP. These include: Section 4.2 (Good Housekeeping), Section 5.6 (HM/HW Accumulation Area BMPs), and Section 5.7 (Outdoor Storage BMPs). HM/HW accumulation and management is detailed in the OPLAN 19-3, maintained by 673 CES/CEAN with this SWPPP.

6.1.3.5 Fuel System and Fueling Areas

Minimize the discharge of fuel to the storm sewer/surface waters resulting from fuel servicing activities or other operations conducted in support of the fuel system. Consider the following

control measures (or their equivalents): implementing spill and overflow practices (e.g., placing absorptive materials beneath aircraft during fueling operations); using only dry cleanup methods; and collecting storm water runoff.

Activity-specific BMPs for fueling and fuel storage at JBER are discussed in Section 5.1 of this SWPPP and in the JBER SPCC/C-Plan.

6.1.3.6 Source Reduction and Management of Runoff

The focus of source reduction BMP requirements of the MSGP is minimizing, and where feasible eliminating, the use of urea and glycol-based deicing chemicals, in order to reduce the aggregate amount of deicing chemicals used and/or lessen the environmental impact. The focus of runoff management requirements of the MSGP is to control or manage contaminated runoff to minimize the amount of pollutants being discharged from the site. Chemicals listed in the MSGP that can replace ethylene glycol, propylene glycol and urea, include potassium acetate, magnesium acetate, calcium acetate, and anhydrous sodium acetate.

Runway Deicing Operation

Minimize contamination of storm water runoff from runways as a result of deicing operations. Evaluate whether over-application of deicing chemicals occurs by analyzing application rates, and adjust as necessary, consistent with considerations of flight safety. Also consider these control measure options (or their equivalents): metered application of chemicals, pre-wetting dry chemical constituents prior to application, installing a runway ice detection system, and implementing anti-icing operations as a preventive measure against ice buildup.

Aircraft Deicing Operations

Minimize contamination of storm water runoff from aircraft deicing operations. Determine whether excessive application of deicing chemicals occurs and adjust as necessary, consistent with considerations of flight safety. Personnel most familiar with the particular aircraft and flight operations in question should conduct this evaluation (versus an outside entity such as the airfield authority). Consider using alternative deicing/anti-icing agents as well as containment measures for all applied chemicals. Also consider these control measure options (or their equivalents) for reducing deicing fluid use: forced-air deicing systems, computer-controlled fixed-gantry systems, infrared technology, hot water, varying glycol content to air temperature, enclosed-basket deicing trucks, mechanical methods, solar radiation, hangar storage, aircraft covers, and thermal blankets for MD-80s and DC-9s. Also consider using ice-detection systems and airport traffic flow strategies and departure slot allocation systems.

Activity-specific BMPs for deicing and anti-icing activities at JBER are discussed in Section 5.5 of this SWPPP.

6.1.3.7 Management of Runoff

Where deicing operations occur, implement a program to control or manage contaminated runoff to minimize the amount of pollutants being discharged from the site. Consider these control measure options (or their equivalents): a dedicated deicing facility with a runoff collection/ recovery system, using vacuum/collection trucks, storing contaminated storm water/deicing fluids in tanks and releasing controlled amounts to a publicly owned treatment works, collecting contaminated runoff in a wet pond for biochemical decomposition (be aware of attracting wildlife that may prove hazardous to flight operations), and directing runoff into vegetative swales or other infiltration measures. Also consider recovering deicing materials when these materials are applied during non-precipitation events (e.g., covering storm sewer inlets, using booms, installing absorptive interceptors in the drains, etc.) to prevent these materials from later becoming a source of storm water contamination. Used deicing fluid should be recycled whenever possible.

6.1.3.8 Deicing Season

The permittee must determine the seasonal timeframe (e.g., December – February, October – March, etc.) during which deicing activities typically occur at the facility. Implementation of control measures, including any BMPs, facility inspections, and monitoring must be conducted with particular emphasis throughout the defined deicing season. If the facility meets the deicing chemical usage thresholds of 100,000 gallons of glycol and/or 100 tons of urea, the deicing season identified is the timeframe during which the permittee must obtain the four required benchmark monitoring event results for deicing-related parameters (i.e., biological oxygen demand, chemical oxygen demand, ammonia, and pH).

Storm water monitoring at JBER is discussed in Section 7 of this SWPPP.

6.1.3.9 Drainage Area Site Map

Document in the SWPPP²² the following areas of the facility and indicate whether activities occurring there may be exposed to precipitation/surface runoff: aircraft and runway deicing operations, fueling stations, aircraft, ground vehicle, and equipment maintenance/cleaning areas, storage areas for aircraft, ground vehicles, and equipment awaiting maintenance.

6.1.3.10 Potential Pollutant Sources

In the inventory of exposed materials, describe in the SWPPP the potential for the following activities and facility areas to contribute pollutants to storm water discharges: aircraft, runway, ground vehicle, and equipment maintenance and cleaning, aircraft and runway deicing operations (including apron and centralized aircraft deicing stations, runways, taxiways, and

²² Requirement in MSGP Part 8.S.4.1; addressed in Figure 6 of this SWPPP.

ramps). If deicing chemicals are used, maintain a record of the types (including the Material Safety Data Sheets [MSDS]) used and the monthly quantities, either as measured or, in the absence of metering, as estimated to the best of the permittee's knowledge. This includes all deicing chemicals, not just glycols and urea (e.g., potassium acetate), because large quantities of these other chemicals can still have an adverse impact on receiving waters. Tenants or other fixed-based operations that conduct deicing operations must provide the above information to the airfield authority for inclusion with any comprehensive air transportation facility SWPPP(s).

Potential pollutants associated with deicing and anti-icing activities at JBER are discussed in Section 3.1.5 of this SWPPP.

6.1.3.11 Vehicle and Equipment Wash Water Requirements

If vehicle and/or equipment wash water from Sector S facilities at JBER were to be discharged to waters of the U.S., the MSGP requirement of this section would apply.

Attach to, or reference in the SWPPP, a copy of the APDES permit issued for vehicle/equipment wash water or, if an APDES permit has not been issued, a copy of the pending application²³. If an industrial user permit is issued under a local pretreatment program, include a copy in the SWPPP. In any case, if subject to another permit, describe the control measures for implementing all non-storm water discharge permit conditions or pretreatment requirements in the SWPPP. If wash water is handled in another manner (e.g., hauled off-site, retained onsite), describe the disposal method and attach all pertinent documentation/information (e.g., frequency, volume, destination, etc.) in the SWPPP.

The potential for vehicle and equipment wash water to enter the storm sewer system at JBER is discussed in Section 3.1.3 of this SWPPP; activity-specific BMPs for washing vehicles and equipment at JBER is provided in Section 5.3.

6.1.3.12 Documentation of Control Measures Used for Management of Runoff

Document in the SWPPP²⁴ the control measures used for collecting or containing contaminated melt water from collection areas used for disposal of contaminated snow.

The management of contaminated snow at JBER to prevent polluted melt water from entering the storm sewer system is discussed in Sections 4.5.2 and 4.8 of this SWPPP and Sections 1.6.2.1, 1.6.2.6, 3.4.5, and Appendix B (Sections 2.1.2 – 2.1.4) of the SPCC/C-Plan.

²³ Requirement in MSGP Part 8.S.4.3; this requirement is not applicable at this time.

²⁴ Requirement in MSGP Part 8.S.4.4

6.1.3.13 Monthly Inspection Requirement

At a minimum, conduct routine facility inspections at least monthly during the deicing season (e.g., October through April for most mid-latitude air transportation facilities). If the facility needs to deice before or after this period, expand the monthly inspections to include all months during which deicing chemicals may be used²⁵.

673 CES/CEAN personnel document monthly storm water pollution prevention inspections as required by the MSGP during the deicing season at JBER.

6.1.3.14 Comprehensive Site Compliance Evaluations

Using only qualified personnel, conduct annual site inspection during periods of actual deicing operations, if possible. If not practicable during active deicing because of weather, conduct the inspection during the season when deicing operations occur and the materials and equipment for deicing are in place.

The CSCE is discussed in Section 8.3 of this SWPPP.

6.1.4 Additional SWPPP Requirements

JBER's airfield authority and tenants of the airfield are encouraged to work in partnership in the development of the SWPPP. If an airfield tenant obtains authorization under this permit and develops a SWPPP for discharges from their own areas of the airfield, prior to authorization, that SWPPP must be coordinated and integrated with this JBER SWPPP. Tenants of the airfield facility include air passenger or cargo companies, fixed based operators and other parties who have contracts with the airfield authority to conduct business operations on airfield property and whose operations result in storm water discharges associated with industrial activity.

6.2 Sector K – Hazardous Waste Treatment, Storage, or Disposal facilities

6.2.1 Sector K at JBER

Storm water discharges from hazardous waste TSDFs, including those that are operating under interim status or a permit under subtitle C of RCRA are required to have MSGP coverage. 673 CES/CEAN operates one or more²⁶ Sector K facilities at JBER.

²⁵ The monthly inspection requirement strictly applies to Sector S deicing/anti-icing operations at the airfield, and is in addition to the quarterly inspection requirement. See MSGP Part 8.S.5.1.

²⁶ At the time this SWPPP was prepared JBER was considering the use of a second TSDF on the installation.

6.2.2 Covered Storm Water Discharges

The requirements in Subpart K of the MSGP apply to storm water discharges associated with industrial activity from hazardous waste TSDFs as identified by the Activity Code specified under Sector K in Table D-1 of Appendix D of the permit.

6.2.3 Industrial Activities Covered by Sector K

This permit authorizes storm water discharges associated with industrial activity from facilities that treat, store, or dispose of hazardous wastes, including those that are operating under interim status or a permit under subtitle C of RCRA.

6.2.4 Limitations on Coverage

Prohibition of Non-Storm Water Discharges. The following are not authorized by this permit: leachate, gas collection condensate, drained free liquids, contaminated groundwater, laboratory-derived wastewater, and contact wash water from washing truck and rail car exteriors and surface areas that have come in direct contact with solid waste at a landfill facility.

6.2.5 Sector-specific BMPs

The only sector-specific requirement for the JBER TSDF(s) is the sector-specific benchmark monitoring addressed in the analytical monitoring section of this SWPPP (Section 7.7).

6.3 No Exposure Certification

The MSGP certification for No Exposure provides permittees with a mechanism to conditionally exclude industrial activities²⁷ from permit coverage where there is “No Exposure” of industrial materials and activities to rain, snow, snowmelt, and/or runoff. Only discharges from industrial activities and materials that are composed entirely of storm water²⁸ are eligible for No Exposure Certification. ADEC requires that the *No Exposure Certification for Exclusion from APDES Storm Water Permitting* form be filled out for each facility certifying No Exposure. Each certification form must be signed by an authorized official who understands eligibility requirements for No Exposure, and certifies that there are no discharges of storm water contaminated by exposure to industrial activities or materials from the industrial facility identified on each form.

²⁷ As defined by 40 CFR, Section 122.26(b)(14)

²⁸ “Storm water” is defined in MSGP Appendix A (Definitions, Abbreviations, and Acronyms) as: “stormwater runoff, snow melt runoff, and surface runoff and drainage. See 40 CFR 122.26(b)(13).”

Although ADEC is the permitting authority for Phase II storm water compliance in the State of Alaska, ADEC guidance for No Exposure eligibility could not be found during the preparation of this SWPPP. EPA's definition of No Exposure²⁹ follows:

"No exposure is defined as all industrial materials and activities are protected by a storm resistant shelter to prevent exposure to rain, snow, snowmelt, and/or runoff. Industrial materials or activities include, but are not limited to, material handling equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products, or waste products."

Criteria that must be satisfied by permittees to be granted conditional exclusion for No Exposure are established in 40 CFR 122.26(g), and are provided below:

1. *Qualification.* To qualify for this exclusion, the operator of the discharge must:
 - i. Provide a storm resistant shelter to protect industrial materials and activities from exposure to rain, snow, snow melt, and runoff;
 - ii. Complete and sign (according to §122.22) a certification that there are no discharges of storm water contaminated by exposure to industrial materials and activities from the entire facility, except as provided in paragraph (g)(2) of this section;
 - iii. Submit the signed certification to the NPDES permitting authority once every five years;
 - iv. Allow the Director to inspect the facility to determine compliance with the "no exposure" conditions;
 - v. Allow the Director to make any "no exposure" inspection reports available to the public upon request; and
 - vi. For facilities that discharge through an MS4, upon request, submit a copy of the certification of "no exposure" to the MS4 operator, as well as allow inspection and public reporting by the MS4 operator.
2. *Industrial materials and activities not requiring storm resistant shelter.* To qualify for this exclusion, storm resistant shelter is not required for:
 - i. Drums, barrels, tanks, and similar containers that are tightly sealed, provided those containers are not deteriorated and do not leak ("Sealed" means banded or otherwise secured and without operational taps or valves);
 - ii. Adequately maintained vehicles used in material handling; and

²⁹ Stormwater Phase II Final Rule Conditional No Exposure Exclusion for Industrial Activity, Fact Sheet 4.0, revised December, 2005

- iii. Final products, other than products that would be mobilized in storm water discharge (e.g., rock salt).

3. *Limitations*

- i. Storm water discharges from construction activities identified in paragraphs (b)(14)(x) and (b)(15) are not eligible for this conditional exclusion.
 - ii. This conditional exclusion from the requirement for an NPDES permit is available on a facility-wide basis only, not for individual outfalls. If a facility has some discharges of storm water that would otherwise be “No Exposure” discharges, individual permit requirements should be adjusted accordingly.
 - iii. If circumstances change and industrial materials or activities become exposed to rain, snow, snow melt, and/or runoff, the conditions for this exclusion no longer apply. In such cases, the discharge becomes subject to enforcement for un-permitted discharge. Any conditionally exempt discharger who anticipates changes in circumstances should apply for and obtain permit authorization prior to the change of circumstances.
 - iv. Notwithstanding the provisions of this paragraph, the NPDES permitting authority retains the authority to require permit authorization (and deny this exclusion) upon making a determination that the discharge causes, has a reasonable potential to cause, or contributes to an in-stream excursion above an applicable water quality standard, including designated uses.
4. *Certification.* The No Exposure certification must require the submission of the following information, at a minimum, to aid the NPDES permitting authority in determining if the facility qualifies for the no exposure exclusion:
- i. The legal name, address and phone number of the discharger (see §122.21(b));
 - ii. The facility name and address, the county name and the latitude and longitude where the facility is located;
 - iii. The certification must indicate that none of the following materials or activities are, or will be in the foreseeable future, exposed to precipitation:
 - A. Using, storing or cleaning industrial machinery or equipment, and areas where residuals from using, storing or cleaning industrial machinery or equipment remain and are exposed to storm water;
 - B. Materials or residuals on the ground or in storm water inlets from spills/leaks;
 - C. Materials or products from past industrial activity;
 - D. Material handling equipment (except adequately maintained vehicles);

- E. Materials or products during loading/unloading or transporting activities;
 - F. Materials or products stored outdoors (except final products intended for outside use, e.g., new cars, where exposure to storm water does not result in the discharge of pollutants);
 - G. Materials contained in open, deteriorated or leaking storage drums, barrels, tanks, and similar containers;
 - H. Materials or products handled/stored on roads or railways owned or maintained by the discharger;
 - I. Waste material (except waste in covered, non-leaking containers, e.g., dumpsters);
 - J. Application or disposal of process wastewater (unless otherwise permitted); and
 - K. Particulate matter or visible deposits of residuals from roof stacks/vents not otherwise regulated, i.e., under an air quality control permit, and evident in the storm water outflow;
- iv. All No Exposure Certifications must include the following certification statement, and be signed in accordance with the signatory requirements of §122.22: "I certify under penalty of law that I have read and understand the eligibility requirements for claiming a condition of "No Exposure" and obtaining an exclusion from NPDES storm water permitting; and that there are no discharges of storm water contaminated by exposure to industrial activities or materials from the industrial facility identified in this document (except as allowed under paragraph (g)(2)) of this section. I understand that I am obligated to submit a no exposure certification form once every five years to the NPDES permitting authority and, if requested, to the operator of the local MS4 into which this facility discharges (where applicable). I understand that I must allow the NPDES permitting authority, or MS4 operator where the discharge is into the local MS4, to perform inspections to confirm the condition of no exposure and to make such inspection reports publicly available upon request. I understand that I must obtain coverage under an NPDES permit prior to any point source discharge of storm water from the facility. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly involved in gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

An ADEC compliance inspector advised the JBER Water Program Manager during a November 2011 compliance visit that the Defense Logistics Agency (DLA) Document Services facility

(Sector X – Printing and Publishing) located in JBER-R Building 984 was eligible for No Exposure Certification. Following that determination, JBER submitted No Exposure Certification for Building 984 to ADEC. No formal reply from ADEC has been received on this submittal.

Industrial facilities at JBER must comply with numerous environmental requirements under multiple programs. JBER continues to identify redundancy and eliminate it where possible, while still meeting compliance objectives. Following the DLA Document Services certification, 673 CES/CEAN evaluated the No Exposure criteria above to determine if additional facilities on the installation were eligible.

Site visits were conducted at potential buildings during the first, second, and third calendar quarters of 2012 by the JBER Water Program Manager and/or the JBER storm water compliance contractor. Visual inspections occurred during walk-through visits of potential buildings, and building activities were observed. Facility personnel were interviewed to establish if there would be potential exposure from industrial activities or materials that are conducted at the facility, but that were not being conducted at the time of inspection. Where identical building use, design, and activities occurred in separate buildings, at least one representative building was observed and personnel interviewed, to ensure no additional operational attributes would affect the No Exposure determination at the unvisited buildings.

Following this analysis, it is JBER's position that approximately 30 Sector S facilities, 17 Sector J activities, and one Sector X facility on the installation meet the eligibility requirements for No Exposure. As sector-specific requirements for Sector S are discussed in Section 6.1, they are not duplicated in this section. The rationale for No Exposure at applicable Sector S facilities at JBER, however, is provided below. Following that discussion, the sector-specific requirements and rationale for No Exposure for Sectors J and X at JBER are provided, respectively.

6.3.1 No Exposure Certification for Applicable Sector S Facilities at JBER

Sector S facilities at JBER that conduct industrial activities that are not exposed to storm water (i.e., from which runoff cannot enter waters of the U.S. or to conveyances leading to waters of the U.S.) are discussed in this section. These facilities and their No Exposure status are identified in Table 1, and No Exposure Certification forms for them are provided in Appendix L.

Sector S facilities with No Exposure at JBER conduct their operations inside respective buildings where industrial activities and materials are not exposed to storm water. HM/HW at these facilities is managed according to strict requirements of the OPLAN 19-3. Additionally, aircraft and associated ground equipment are maintained with more aggressive preventive maintenance schedules than non-Sector S equipment due to safety and mission related requirements. Interior and exterior surfaces are graded to prevent run-on or runoff from entering or exiting Sector S buildings with No Exposure.

Material loading and unloading and off-site tracking of spilled material(s) represent unlikely potential, indirect contamination sources for storm water from activities in these buildings.

Multiple procedural requirements help prevent such contamination from occurring. Industrial materials enter and exit the building in sealed containers, as required by RCRA and/or the OPLAN 19-3. All drums and other containers must have tight fitting lids when not in use. Materials are loaded and unloaded inside the building of use, and spills during material transfer are rare. When spills or leaks do occur, JBER's aggressive spill response program requires personnel to immediately address them. Spill prevention and response protocols at JBER are detailed in the installation SPCC/C-Plan. Buildings where Sector S maintenance occurs that involve significant amounts of fluids have bermed or graded slabs in maintenance bays that direct flow inward, towards an OWS, and/or a fuel/water separator. Post-maintenance inspections and washing prevent materials (e.g., blasting media, paint chips, lubricants, etc.) from exiting the building on tires. These factors, combined with the rarity of significant spills at these facilities and JBER's aggressive spill response greatly reduce the potential for an indoor spill to be inadvertently tracked outdoors.

JBER-E Airfield, which includes the flight line, taxiways, and tarmacs, will be managed as a Sector S facility subject to MSGP coverage. To ensure there are no gaps in coverage on the installation, JBER has identified the outdoor areas adjacent to Sector S facilities with No Exposure as part of the Sector S airfield facility. Since these outdoor areas are subject to both general permit provisions and sector-specific requirements, any leak, spill, or tracked material would be addressed under both the storm water and spill programs. 673 CES/CEAN will be responsible for storm water compliance at these outdoor areas. However, qualified members of the storm water pollution prevention team, such as UECs, or other trained individuals, may contribute to compliance responsibilities in these areas by conducting routine inspections, in-house training of personnel, etc.

The SPCC/C-Plan and OPLAN 19-3 ensure a high standard of environmental compliance at Sector S facilities with No Exposure at JBER. Activities at these facilities are conducted under strict environmental management and oversight. No Exposure Certification for eligible buildings reduces redundancy of environmental management and unnecessary expenditure of valuable resources.

Although conditional exclusion from No Exposure relieves certified facilities from the majority of permit requirements, two actions are still required. JBER industrial facilities with No Exposure should be inspected annually during the CSCE to ensure that the facility still meets eligibility requirements for No Exposure. If the determination is made that there is exposure of industrial activities or materials to storm water due to operational changes at the facility, the facility must comply from that point forward with all pertinent MSGP provisions. Signed certifications for No Exposure must be submitted to ADEC every five years.

6.4 Sector X – Printing and Publishing

6.4.1 Sector X at JBER

The MSGP Sector X designation applies to JBER's reproduction and printing facility. Activities conducted on premises at this facility are limited to document reproduction ("rapid repro" production), binding, and laminating documents and forms. Document reproduction and printing is done on printers that use toner. There is no offset printing performed on site. This facility is also responsible for procuring printed materials from commercial facilities located off the installation.

6.4.1.1 No Exposure Certification for Sector X at JBER

The only materials loaded/unloaded, used, and/or stored at the facility are paper, and dry toner cartridges. The toner arrives in similar packaging to consumer quantities, sealed in wrapping and boxed. Some components are encased in contained plastic shells, then wrapped and boxed. The spent toner (all dry) leaves the facility much like it comes in, also sealed in non-spillable plastic containers and boxed. Delivery trucks back up to a covered loading dock outside the printing shop, where boxes are loaded/unloaded. There is no outdoor storage of materials, equipment or machinery of any kind for the DLA Document Services operation. All activities occur indoors. This facility recycles spent toner cartridges and generates no hazardous waste. No fuel storage is associated with this facility. In summary, none of the management requirements or recommended Sector X BMPs are applicable to JBER DLA Document Services.

JBER was advised by ADEC during a November 2011 compliance visit that the facility was eligible for No Exposure Certification. The No Exposure Certification form for DLA Document Services is provided in Appendix L.

Should any operational changes occur at this facility that disqualify No Exposure Certification, the facility must implement the applicable MSGP requirements for Sector X presented below.

6.4.2 Covered Storm Water Discharges

The requirements below apply to storm water discharges associated with industrial activity from printing and publishing facilities identified by the SIC Codes specified under Sector X in Table D-1 of Appendix D of the 2008 MSGP.

6.4.3 Sector-Specific Good Housekeeping BMPs

According to the MSGP, the following BMPs must be implemented at this facility where applicable.

6.4.3.1 Material Storage Areas

Plainly label and store all containerized materials (e.g., skids, pallets, solvents, bulk inks, hazardous waste, empty drums, portable and mobile containers of plant debris, wood crates, steel racks, and fuel oil) in a protected area, away from drains. Minimize contamination of the storm water runoff from such storage areas. Also consider an inventory control plan to prevent excessive purchasing of potentially hazardous substances.

6.4.3.2 Material Handling Area

Minimize contamination of storm water runoff from material handling operations and areas (e.g., blanket wash, mixing solvents, loading and unloading materials). Consider the following (or their equivalents): using spill and overflow protection, covering fueling areas, and covering or enclosing areas where the transfer of materials may occur. When applicable, address the replacement or repair of leaking connections, valves, transfer lines, and pipes that may carry chemicals or wastewater.

6.4.4 Fueling Areas

Minimize contamination of storm water runoff from fueling areas. Consider the following (or their equivalents): covering the fueling area, using spill and overflow protection, minimizing runoff of storm water to the fueling areas, using dry cleanup methods, and treating and/or recycling storm water runoff collected from the fueling area.

6.4.4.1 Employee Training

As part of the employee-training program, address, at a minimum, the following activities (as applicable): spent solvent management, spill prevention and control, used oil management, fueling procedures, and general good housekeeping practices.

6.4.4.2 Above Ground Storage Tank Area

Minimize contamination of the storm water runoff from AST areas, including the associated piping and valves. Consider the following (or their equivalents): regularly cleaning these areas, explicitly addressing tanks, piping, and valves in the SPCC program, minimizing storm water runoff from adjacent areas, restricting access to the area, inserting filters in adjacent catch basins, providing absorbent booms in un-bermed fueling areas, using dry cleanup methods, and permanently sealing drains within critical areas that may discharge to a storm drain.

6.4.4.3 Description of Good Housekeeping Measures for Material Storage Areas

Describe in the SWPPP the containment area or enclosure for materials stored outdoors (i.e., If this facility were to begin to store materials outdoors, a description of the containment area or enclosure must be added to the SWPPP)³⁰.

6.5 Sector J – Non-Metallic Mineral Mining and Dressing

6.5.1 Sector J at JBER

This sector designation applies to multiple gravel borrow pit sites at JBER. Gravel pits at JBER are used intermittently, depending on what construction or maintenance projects are under way. Typically, their use is during the construction season, between May and October; however, use of these pits varies, and they are not used during every construction season. Gravel from the pits is primarily unclassified fill for vertical construction foundations. Gravel is excavated and transported from the sites to the point of use. Locations of Sector J activities at JBER are presented on Figure 9.

6.5.2 No Exposure Certification for Sector J at JBER

At this time, storm water runoff from Sector J operations on JBER do not flow to waters of the U.S. or to conveyances that lead to waters of the U.S. All JBER gravel pits and quarries drain into themselves. The No Exposure Certification forms for Sector J gravel pits at JBER are provided in Appendix L. Should any changes occur that disqualify No Exposure Certification for these operations, JBER must implement the applicable MSGP requirements for Sector J, presented below, at those respective locations.

6.5.3 Covered Sector J Storm Water Discharges

The requirements below apply to storm water discharges associated with industrial activity from Non-Metallic Mineral Mining and Dressing identified by the SIC Codes specified under Sector J in Table D-1 of Appendix D of the 2008 MSGP.

6.5.4 Limitation on Coverage and Prohibition of Non-storm Water Discharges

Most storm water discharges subject to an existing effluent limitation guideline at 40 CFR 436 are not authorized by this permit. The 2008 MSGP authorizes storm water discharges only from mine dewatering discharges that are composed entirely of storm water or uncontaminated groundwater seepage from construction, sand and gravel, industrial sand, and crushed stone mining facilities. This applies to sites located in EPA Region 10.

³⁰ Requirement from MSGP Part 8.X.3.1; this requirement is not applicable at this time.

6.5.5 Sector-Specific BMPs

The following sections discuss Sector J specific BMPs required by the 2008 MSGP. If runoff from Sector J activities at JBER becomes exposed to waters of the U.S. or conveyances leading to waters of the U.S. in the future, the following requirements may apply.

6.5.5.1 Clearing, Grading, and Excavation Activities

Selecting and Installing Control Measures

For all areas affected by clearing, grading, and excavation activities, select, design, install, and implement control measures that meet applicable effluent limits.

Good Housekeeping

Litter, debris, and chemicals must be prevented from becoming a pollutant source in storm water discharges.

Retention and Detention of Storm Water Runoff

For drainage locations covering more than one acre, sediment basins and/or temporary sediment traps should be used. Silt fences, vegetative buffer strips, or equivalent sediment controls are required for all down-slope boundaries (and for those side-slope boundaries deemed appropriate as dictated by individual site conditions) of the development area unless a sediment basin is present providing storage for a calculated volume of runoff from a two-year, 24-hour storm or 3,600 cubic feet of storage per acre drained.

6.5.5.2 Inspection of Clearing, Grading, and Excavation Activities

Inspection Frequency

Inspections must be conducted either at least once every seven calendar days or at least once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater. Inspection frequency may be reduced to at least once every month if the entire site is temporarily stabilized, if runoff is unlikely due to winter conditions (e.g., site is covered with snow, ice, or the ground is frozen), or construction is occurring during seasonal arid periods in arid areas and semi-arid areas.

Location of Inspections

Inspections must include all areas of the site disturbed by clearing, grading, and/or excavation activities and areas used for storage of materials that are exposed to precipitation. Sedimentation and erosion control measures implemented must be observed to ensure proper operation. Where accessible, discharge locations must be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.

Where discharge locations are inaccessible, nearby downstream locations must be inspected to the extent that such inspections are practicable. Locations where vehicles enter or exit the site must be inspected for evidence of significant off-site sediment tracking. For each inspection required above, an inspection report must be completed. At a minimum, the inspection report must include the information required in Part 4.1 of the MSGP.

6.5.5.3 Cessation of Clearing, Grading, and Excavation Activities

Inspections and Maintenance

Inspections and maintenance of control measures, including any BMPs, associated with clearing, grading, and/or excavation activities being conducted as part of the exploration and construction phase of a mining operation must continue until final stabilization has been achieved on all portions of the disturbed area or until the commencement of the active mining phase for those areas that have been temporarily stabilized as a precursor to mining.

Temporary Stabilization of Disturbed Areas

Stabilization measures should be initiated immediately in portions of the site where clearing, grading, and/or excavation activities have temporarily ceased, but in no case more than 14 days after the clearing, grading, and/or excavation activities in that portion of the site have temporarily ceased. In arid, semiarid, and drought-stricken areas, or in areas subject to snow or freezing conditions, where initiating perennial vegetative stabilization measures is not possible within 14 days after mining, exploration, and/or construction activity has temporarily ceased, temporary vegetative stabilization measures must be initiated as soon as practicable. Until temporary vegetative stabilization is achieved, interim measures such as erosion control blankets with an appropriate seed base and tackifiers must be employed. In areas of the site where exploration and/or construction has permanently ceased prior to active mining, temporary stabilization measures must be implemented to minimize mobilization of sediment or other pollutants until such time as the active mining phase commences.

Final Stabilization of Disturbed Areas

Stabilization measures should be initiated immediately in portions of the site where mining, exploration, and/or construction activities have permanently ceased, but in no case more than 14 days after the exploration and/or construction activity in that portion of the site has permanently ceased. In arid, semiarid, and drought-stricken areas, or in areas subject to snow or freezing conditions, where initiating perennial vegetative stabilization measures is not possible within 14 days after mining, exploration, and/or construction activity has permanently ceased, final vegetative stabilization measures must be initiated as soon as possible. Until final stabilization is achieved, temporary stabilization measures must be used, such as erosion control blankets with an appropriate seed base and tackifiers.

6.5.5.4 Employee Training

Conduct employee training at least annually at active and temporarily inactive sites. All employee training(s) must be documented with the SWPPP.

6.5.5.5 Storm Water Controls

Apart from the control measures implemented to satisfy effluent limits in Part 2 of the MSGP, where necessary, implement the following additional control measures. The potential pollutants for specific operations in regard to this sector determine the priority of the control measures selected. If any of the control measures, as described below, are implemented, document them in the SWPPP. If control measures are implemented or planned but are not listed here (e.g., substituting a less toxic chemical for a more toxic one), include descriptions of them in the SWPPP.

Storm Water Diversions

Consider diverting storm water away from potential pollutant sources. Following are some control measure options: interceptor or diversion controls (e.g., dikes, swales, curbs, or berms); pipe slope drains; subsurface drains; conveyance systems (e.g., channels or gutters, open-top box culverts, and water bars; rolling dips and road sloping; roadway surface water deflector and culverts); or their equivalents.

Capping

When capping is necessary to minimize pollutant discharges in storm water, identify the source being capped and the material used to construct the cap.

Treatment

If treatment of storm water (e.g., chemical or physical systems, oil/water separators, artificial wetlands) is necessary to protect water quality, describe the type and location of treatment used. Passive and/or active treatment of storm water runoff is encouraged. Treated runoff may be discharged as a storm water source regulated under this permit provided the discharge is not combined with discharges subject to effluent limitation guidelines for the Mineral Mining and Processing Point Source Category (40 CFR Part 436).

6.5.5.6 Certification of Discharge Testing

Test or evaluate all outfalls covered under this permit for the presence of specific mining-related non-storm water discharges such as discharges subject to effluent limitations guidelines (e.g., 40 CFR 436). Alternatively (if applicable), keep a certification with the SWPPP.

6.5.5.7 Additional SWPPP Requirements

Nature of Industrial Activities

Document in the SWPPP³¹ the mining and associated activities that can potentially affect the storm water discharges covered by this permit, including a general description of the location of the site relative to major transportation routes and communities.

6.5.5.8 Site Map

Document in the SWPPP³² the locations of the following (as appropriate): mining or milling site boundaries; access and haul roads; outline of the drainage areas of each storm water outfall within the facility with indications of the types of discharges from the drainage areas; location(s) of all permitted discharges covered under an individual NPDES permit, outdoor equipment storage, fueling, and maintenance areas; materials handling areas; outdoor manufacturing, outdoor storage, and material disposal areas; outdoor chemicals and explosives storage areas; overburden, materials, soils, or waste storage areas; location of mine drainage dewatering or other process water; heap leach pads; off-site points of discharge for mine dewatering and process water; surface waters; boundary of tributary areas that are subject to effluent limitations guidelines; and location(s) of reclaimed areas.

6.5.5.9 Potential Pollutant Sources

For each area of the mine or mill site where storm water discharges associated with industrial activities occur, document in the SWPPP³³ the types of pollutants (e.g., heavy metals, sediment) likely to be present in significant amounts.

6.5.6 Certification of Permit Coverage for Commingled Non-storm Water Discharges

If it is determined that the facility is able to certify that a particular discharge composed of commingled storm water and non-storm water is covered under a separate NPDES permit, and that permit subjects the non-storm water portion to effluent limitations prior to any commingling, such certification must be retained with the SWPPP. This certification must identify the non-storm water discharges, the applicable NPDES permit(s), the effluent limitations placed on the non-storm water discharge by the permit(s), and the points at which the limitations are applied.

³¹ Requirement in MSGP Part 8.J.6.1; this requirement is not applicable at this time.

³² Requirement in MSGP Part 8.J.6.2; this requirement is not applicable at this time.

³³ Requirement in MSGP Part 8.J.6.2; this requirement is not applicable at this time.

6.5.7 Sector-specific Benchmarks

Part 8.J.8 of the MSGP identifies benchmarks that apply to the specific subsectors of Sector J. These benchmarks apply to both the primary industrial activity and any co-located industrial activities, which describe site activities at the permitted facility. Sector J benchmark monitoring is discussed in detail in the Analytical Monitoring section (Section 7.0) of this SWPPP.

6.5.7.1 Inactive and Unstaffed Sites Conditional Exemption from No Exposure Requirement for Routine Inspections, Quarterly Visual Assessments, and Benchmark Monitoring

As a Sector J facility, if the permittee is seeking to exercise a waiver from either the routine inspection, quarterly visual assessment, or the benchmark monitoring requirements for inactive and unstaffed sites (including temporarily inactive sites), the permittee is conditionally exempt from the requirement to certify that “there are no industrial materials or activities exposed to storm water” in Parts 4.2.3 and 6.2.1.3 of the MSGP, respectively. This exemption is conditioned on the following:

- If circumstances change and the facility becomes active and/or staffed, this exception no longer applies and the permittee must immediately begin complying with the applicable benchmark monitoring requirements as if the permittee is in their first year of permit coverage and begin complying with the quarterly visual assessment requirements; and
- ADEC retains the authority to revoke this exemption and/or the monitoring waiver where it is determined that the discharge causes, has a reasonable potential to cause, or contributes to an in-stream excursion above an applicable water quality standard, including designated uses.

Subject to the two conditions above, if the permitted facility is inactive and unstaffed, the permittee is waived from the requirement to conduct quarterly visual assessments and routine facility inspections. The permittee is not waived from conducting the MSGP Part 4.3 comprehensive site inspection. More frequent inspections are encouraged where there is reason to believe that severe weather or natural disasters may have damaged control measures or increased discharges.

6.5.8 Effluent Limitations Based on Effluent Limitations Guidelines

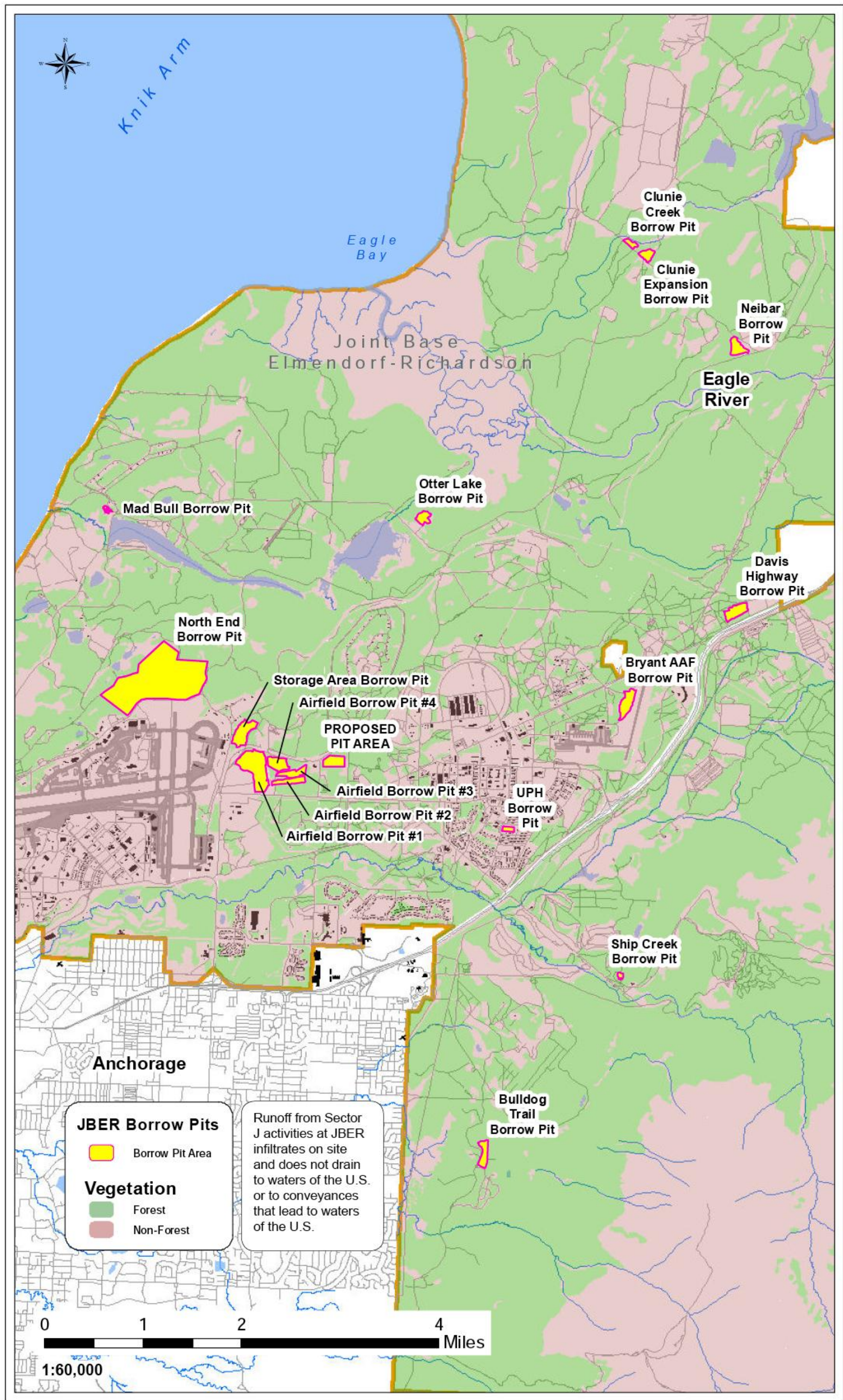
Table 8.J-2 of the MSGP identifies effluent limits that apply to the industrial activities associated with mine dewatering. Compliance with these effluent limits is to be determined based on discharges from these industrial activities independent of commingling with any other waste streams that may be covered under this permit.

6.5.9 Termination of Permit Coverage

Termination of Permit Coverage for Sites Reclaimed After December 17, 1990: A site or a portion of a site that has been released from applicable state or federal reclamation requirements after December 17, 1990, is no longer required to maintain coverage under this permit. If the site or portion of a site reclaimed after December 17, 1990, was not subject to reclamation requirements, the site or portion of the site is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed as defined in Part 8.J.7.2 of the MSGP.

Termination of Permit Coverage for Sites Reclaimed Before December 17, 1990: A site or portion of a site that was released from applicable state or federal reclamation requirements before December 17, 1990, or that was otherwise reclaimed before December 17, 1990, is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed. A site or portion of a site is considered to have been reclaimed if: (1) storm water runoff that comes into contact with raw materials, intermediate byproducts, finished products, and waste products does not have the potential to cause or contribute to violations of state water quality standards; (2) soil-disturbing activities related to mining at the sites or portion of the site have been completed; (3) the site or portion of the site has been stabilized to minimize soil erosion; and (4) as appropriate depending on location, size, and the potential to contribute pollutants to storm water discharges, the site or portion of the site has been re-vegetated, will be amenable to natural re-vegetation, or will be left in a condition consistent with the post-mining land use.

Figure 9. Borrow Pits at JBER



7.0 SCHEDULES AND PROCEDURES FOR MONITORING

7.1 Monitoring Procedures

Part 5.1.5.2 of the MSGP states that the SWPPP must document procedures for conducting the five types of analytical monitoring specified by this permit, where applicable to the facility, and describes what must be documented. Part 6.0 of the permit describes required monitoring and procedures.

The five types of analytical monitoring are:

- Benchmark monitoring
- Effluent limitations monitoring
- State- or tribal-specific requirements monitoring
- Impaired waters monitoring
- Other monitoring required by ADEC

This section describes analytical monitoring requirements of the MSGP applicable to JBER. JBER's analytical monitoring program for compliance with the MSGP is summarized in table format at the end of this section.

7.2 Benchmark Monitoring

At this time, four industrial sectors have been identified at JBER: Sectors J, K, S, and X.

7.2.1 Benchmark Parameters and Control Values

Sector J

At the time this SWPPP was prepared, storm water at all gravel extraction sites at JBER infiltrated onsite. No Exposure Certification forms for Sector J activity sites are included in Appendix L of this SWPPP. If conditions change at these sites (i.e., grading, the addition of new entry/exits, dewatering, etc.) such that runoff has the potential to drain to conveyances leading to waters of the U.S., or if new sites operate with this potential, JBER will have to implement the Sector J sampling requirements discussed in this section. These requirements regard Subsector J1 (sand and gravel mining). The following benchmark parameters and benchmark monitoring concentrations for these parameters apply to Subsector J1.

| | |
|-------------------------------|-----------|
| Nitrate plus Nitrite Nitrogen | 0.68 mg/L |
| Total Suspended Solids (TSS) | 100 mg/L |

Sector K

Sector K at JBER does not include a hazardous waste landfill, so only the benchmark monitoring required for Subsector K1, "ALL" is required. Benchmark monitoring parameters for Sector K at JBER and associated monitoring concentrations for these parameters are:

| | |
|------------------------------|----------------------------------|
| Ammonia | 2.14 mg/L |
| Total Magnesium | 0.064 mg/L |
| Chemical Oxygen Demand (COD) | 120 mg/L |
| Total Arsenic | 0.15 mg/L |
| Total Cadmium | Hardness Dependent ³⁴ |
| Total Cyanide | 0.022 mg/ L |
| Total Lead | Hardness Dependent |
| Total Mercury | 0.0014 mg/L |
| Total Selenium | 0.005 mg/L |
| Total Silver | Hardness Dependent |

Soils in Alaska can have high background concentrations of some parameters listed above. The following language is taken from Part 6.2.1.2 of the MSGP and describes the process to follow where high background levels exist:

Natural background pollutant levels: Following the first 4 quarters of benchmark monitoring (or sooner if the exceedance is triggered by less than 4 quarters of data, see above [in MSGP]), if the average concentration of a pollutant exceeds a benchmark value, and you determine that exceedance of the benchmark is attributable solely to the presence of that pollutant in the natural background, you are not required to perform corrective action or additional benchmark monitoring provided that:

- The average concentration of your benchmark monitoring results is less than or equal to the concentration of that pollutant in the natural background;*
- You document and maintain with your SWPPP, as required in Part 5.4, your supporting rationale for concluding that benchmark exceedances are in fact attributable solely to natural background pollutant levels. You must include in your supporting rationale any*

³⁴ See Appendix J of the MSGP, "Calculating Hardness in Receiving Waters for Hardness Dependent Metals," for methodology of determining hardness of receiving waters. Table 8.K-1 of the MSGP displays benchmark values for cadmium, lead, and silver relative to distinct water hardness ranges.

data previously collected by you or others (including literature studies) that describe the levels of natural background pollutants in your stormwater discharge; and

- *You notify EPA [ADEC] on your final quarterly benchmark monitoring report that the benchmark exceedances are attributable solely to natural background pollutant levels.*

Natural background pollutants include those substances that are naturally occurring in soils or groundwater. Natural background pollutants do not include legacy pollutants from earlier activity on your site, or pollutants in run-on from neighboring sources which are not naturally occurring.

Sector S

If greater than 100,000 gallons of glycol-based deicing chemicals and/or 100 tons or more of urea is used at JBER-E Airfield on an average annual basis, benchmark monitoring is required under the MSGP. The deicing related parameters below must be monitored, only for those outfalls that collect runoff from areas where deicing activities occur.³⁵

| | |
|---|------------------------------|
| Biochemical Oxygen Demand (BOD ₅) | 30 mg/L |
| COD | 120 mg/L |
| Ammonia | 2.14 mg/L |
| pH | 6.0 – 9.0 s.u. ³⁶ |

Sector X

There are no sector-specific benchmark monitoring requirements for Sector X.

7.2.2 Summary of Required Benchmark Monitoring

Benchmark monitoring must be conducted for the above Sector K and S parameters. Should changes at Sector J activity sites occur disqualifying No Exposure, benchmark monitoring for Sector J parameters above would be required for those operations.

7.2.3 Benchmark Monitoring Schedule

Benchmark monitoring will be performed quarterly for the first four full quarters of permit coverage. As stated in the MSGP, if the average of the four monitoring values for any of the above parameters (the metals, COD, and ammonia for Sector K and BOD, COD, ammonia, and pH for Sector S) does not exceed the respective benchmark value, no additional benchmark monitoring is required. If the average value for any of the above parameters exceeds the

³⁵ Required for SICs 4512-4581

³⁶ "s.u." = Standard pH Units

benchmark value, control measures in this SWPPP must be reviewed, modified as appropriate and technically feasible, and the parameter of concern monitored for another four quarters (or once per year if it is determined that no further pollutant reductions are practicable). This cycle will be repeated in subsequent years if the benchmark monitoring results for a parameter continue to exceed the benchmark for that parameter. (Refer to Part 6.2.1 of the MSGP for details of this requirement and associated reporting.)

7.3 Effluent Limitations Monitoring

7.3.1 Effluent Parameters and Limits

Table 1-1 of the 2008 MSGP lists those sectors that are subject to numeric storm water-specific effluent limitation guidelines. That table includes the following sectors present at JBER: Sectors J and K. The sector-specific sections of the MSGP detail the monitoring required to comply with applicable numeric effluent limits set forth in the MSGP.

In June 2012, the EPA finalized its rule for effluent limitations guidelines (ELGs) and new source performance standards for the Airport Deicing Category. The requirements for this rule are found in 40 CFR Parts 9 and 449. The final rule applies to new and existing primary, commercial airports with 1,000 or more annual jet departures that generate wastewater associated with airport pavement deicing. JBER-E Airfield does not meet these criteria, and therefore, is not required to implement ELGs for deicing at this time.

The final rule states that the EPA intends to incorporate deicing ELGs into the next MSGP, due to be reissued in 2013³⁷. Permit holders will be required to implement provisions of the new permit as applicable. At such time that ADEC promulgates ELG requirements for industrial Sector S facilities, either by utilizing EPA's new MSGP or by issuing individual APDES permits for deicing activities, JBER will have to implement those requirements, as applicable³⁸.

7.3.1.1 Sector J

The following MSGP numeric effluent limits apply to mine dewatering discharges from Sector J quarries/gravel pits covered by the MSGP:

| | |
|----|----------------|
| pH | 6.0 – 9.0 s.u. |
|----|----------------|

However, State of Alaska water quality standards in 18 AAC 70.020(b)(6) impose a stricter standard for pH in discharges to state waters. This effectively reduces the allowable pH range in discharges from Sector J activities at JBER to 6.5 – 8.5 (see Section 7.4 below). If JBER

³⁷ Federal Register, Volume 77, No. 95, May 16, 2012

³⁸ EPA and ADEC may issue an administrative extension for the 2008 MSGP

were mining sand for purposes other than construction, the effluent limit for TSS would also apply (See Table 8.J-2 in the MSGP).

7.3.1.2 Sector K

Only discharges from hazardous waste landfills are subject to numeric effluent limitations. Since JBER does not operate a hazardous waste landfill, there are no applicable numeric effluent limitations for monitoring for this sector at the installation.

7.3.1.3 Sector S

At this time, there are no Sector S numeric effluent limits in the MSGP (See Section 7.3.1 above).

7.3.1.4 Sector X

There are no Sector X numeric effluent limits in the MSGP.

7.3.2 Summary of Required Effluent Monitoring

Should changes at Sector J activity sites occur disqualifying No Exposure, effluent monitoring for pH at Sector J would be required for those operations.

7.3.3 Schedule

Effluent limitations monitoring for Sector J must be performed annually.

7.4 State- or Tribal-Specific Requirements Monitoring

State of Alaska Monitoring Requirements

Part 9.10.1.7 of the MSGP states:

The benchmark monitoring concentrations, as described in Part 8, may exceed the Alaska water quality standards. In those instances where the benchmark monitoring concentration exceeds the Alaska water quality standard, the Alaska water quality standard shall be used as the benchmark monitoring concentration. The following provides the instances where the Alaska Water Quality Standards shall be used as the benchmark values:

- *For Sectors A, D, E, G, J, K, L, O, and S, the acceptable range for pH is 6.5 to 8.5 and may not vary more than 0.5 pH units from natural conditions. See 18 AAC 70.020(b)(6).*

Sectors K and X do not have sector-specific benchmarks identified in the MSGP. The sector-specific benchmark requirements for pH in the MSGP for Sectors J and S are 6.0 – 9.0 s.u. The MSGP includes the identical pH requirement in the sector-specific *effluent limits* for Sectors J, and K, and none for Sectors S and X.

The allowable pH effluent range applicable to JBER industrial discharges is 6.5 – 8.5 s.u., and may not vary more than 0.5 s.u. from natural conditions, as stipulated by 18 AAC 70.020(b)(6).

Tribal-Specific Monitoring Requirements

Part 9 of the MSGP uses the terminology “Indian Country Lands or Territories” in place of “Tribal”. Section 9.10.2 of the permit states that there are no additional monitoring requirements for Indian Country lands in Alaska.

No Tribal or Indian Country monitoring requirements apply.

7.4.1 Impaired Waters Monitoring

The MSGP defines impaired waters as those which have been listed pursuant to Section 303(d) of the Clean Water Act (CWA) and states that if the permittee discharges to an impaired water body, each pollutant for which the water body is impaired must be monitored (if there is a standard analytical method for that parameter). Ship Creek, which receives storm water discharges from JBER facilities, has been listed as an impaired water body.

The segment of Ship Creek from the mouth to the Glenn Highway bridge was originally Section 303(d) listed because fecal coliform bacteria and petroleum hydrocarbons, oil, and grease exceeded the respective water quality standards for these parameters³⁹. Three outfalls at JBER discharge storm water to Ship Creek: JBER-R Outfall 1, JBER-E Outfall 4, and JBER-E Outfall 5.

At the time this SWPPP was prepared, Ship Creek had a Total Maximum Daily Load (TMDL) for fecal coliform bacteria. At the time of SWPPP preparation, ADEC was in the process of delisting petroleum hydrocarbons, oil, and grease from the Ship Creek schedule⁴⁰.

7.4.1.1 Discharges to Impaired Waters with an Established TMDL

Ship Creek has an established TMDL for fecal coliform bacteria. Part 6.2.4.2 of the MSGP states “For storm water discharges to waters for which there is an EPA approved or established TMDL, you [permittee] are not required to monitor for the pollutant for which the TMDL was written unless EPA informs you, upon examination of the applicable TMDL and/or waste load allocation (WLA), that you are subject to such a requirement consistent with the assumptions of the applicable TMDL and/or WLA.” As of the time of this SWPPP’s preparation, neither EPA nor ADEC has informed JBER of the need to monitor for fecal coliform bacteria as a requirement of the MSGP. As a result, there is no requirement for JBER to monitor for fecal coliform bacteria to comply with the MSGP.

³⁹ Appendix J is a summary of Alaska Water Quality Standards Applicable to Ship Creek.

⁴⁰ Ship Creek Petroleum Hydrocarbon Delisting Determination, ADEC, November 2011

7.5 Other Monitoring Required By ADEC

The MSGP states that EPA (i.e., the permitting authority) may impose additional storm water discharge monitoring requirements upon the permittee. At such time that ADEC specifies additional industrial storm water monitoring requirements for JBER, this SWPPP will be updated to reflect the additional requirements.

At this time ADEC has not specified any additional monitoring for JBER to comply with the MSGP.

7.6 Monitoring Responsibilities and Procedures

7.6.1 Monitoring Periods

Quarterly monitoring (e.g., benchmark monitoring), must occur at least once in each of the following 3-month intervals⁴¹:

- January 1 – March 31;
- April 1 – June 30;
- July 1 – September 30; and
- October 1 – December 31.

JBER's monitoring requirements will begin in the first full quarter following the date of discharge authorization, which follows submittal of the NOI. That quarter is expected to be the first quarter of calendar year 2013 (January 1 – March 30, 2013). It is important to note that all four Sector S benchmark samples for deicing parameters must be collected during the deicing season. The deicing season at JBER is October 15 through April 15.

7.6.2 Responsible Staff

The JBER Environmental Flight⁴² will ensure that benchmark monitoring is performed in compliance with the MSGP.

7.6.3 Sampling and Analysis Procedures

Sampling and analysis will be conducted in accordance with 40 CFR 136 and follow the guidelines described in EPA's "Industrial Stormwater Monitoring and Sampling Guide,"⁴³

⁴¹ Benchmark sampling for Sector S deicing parameters may not adhere to this schedule. See SWPPP Section 6.1.3.8.

⁴² 673 CES/CEAN, at the time of SWPPP preparation

⁴³ EPA 832-B-09-003, March 2009

included in Appendix K of this SWPPP. Samples will be analyzed by an Alaska certified laboratory.

7.6.4 Sampling Logistics

One or more grab samples will be taken from Applicable outfalls within 30 minutes of a discharge resulting from a measureable storm event as detailed in Part 6.1.3 of the MSGP. If it is not possible to collect the sample within the first 30 minutes of a measurable storm event, the sample will be collected as soon as practicable after the first 30 minutes and documentation kept with the SWPPP explaining why it was not possible to sample within the first 30 minutes. In the case of snowmelt, (the) sample(s) will be taken during a period with a measurable discharge.

7.6.5 Adverse Weather Conditions

When adverse weather conditions as described in Part 4.2.3 of the MSGP prevents sampling as scheduled, a substitute sample will be obtained during the next qualifying storm event. Adverse weather does not exempt JBER from having to file a benchmark monitoring report in accordance with the sampling schedule. The MSGP requires the permittee to report any failure to monitor as described in Section 7.1 of this SWPPP, indicating the basis for not sampling during the usual reporting period.

7.6.6 Climates with Irregular Storm water Runoff

This MSGP provides alternatives for facilities located in areas where limited rainfall occurs during parts of the year (e.g., arid or semi-arid climates) or in areas where freezing conditions exist that prevent runoff from occurring for extended periods. The latter applies to JBER. Thus, required monitoring events for JBER may be distributed during seasons when precipitation occurs, or when snowmelt results in a measurable discharge from your site. The required number of samples must still be collected.

7.6.7 Exception for Inactive and Unstaffed Sites

The requirement for benchmark monitoring does not apply at a facility that is inactive and unstaffed, as long as there are no industrial materials or activities exposed to storm water. This exception does not presently apply to JBER's industrial sectors.

7.7 Analytical Monitoring Program

Table 5 summarizes JBER's analytical monitoring program for compliance with the MSGP.

Table 5. JBER Analytical Monitoring Program

| Industrial Sector | Monitoring Location (Outfalls) | Benchmark Monitoring | | Effluent Monitoring | | Impaired Waters Monitoring | |
|-------------------|--------------------------------|--|---|---------------------|--|----------------------------|-----------------------|
| | | Schedule | Analytical Parameters | Schedule | Analytical Parameters | Schedule | Analytical Parameters |
| J | NA | NA ⁴⁴ | Nitrate plus nitrate nitrogen, total suspended solids (TSS) | NA | pH (only if dewatering occurs, otherwise NA) | NA | NA |
| K | JBER-E 3 | 1 st 4 full quarters of permit. More if exceed benchmark. | Ammonia, total magnesium, COD, total arsenic, total cadmium, total cyanide, total lead, total mercury, total selenium, total silver | NA | NA | NA | NA |
| S | JBER-E 1 | 1 st 4 full quarters of permit. More if exceed benchmark. | BOD ₅ , COD, ammonia, pH | NA | NA | NA | NA |
| X | NA | NA | NA | NA | NA | NA | NA |

⁴⁴ Should any Sector J activities in the future not qualify for No Exposure, conduct the following monitoring – Benchmark: 1st four full quarters of permit (or, beginning commencement of operation), further sampling if exceed benchmark; Effluent: Annually, starting 1st full quarter after permit issuance (or, from commencement of operation).

7.8 Sampling Data From Previous Permit Term

No discharges were observed at JBER-R Outfall 1 during the previous permit term; thus, no sampling data exist for that outfall. Sampling data collected by EAFB during the previous permit term included deicing parameters sampled during the winter of 2009-2010 at Cherry Hill above JBER-E Outfall 1. No Sector S benchmarks were exceeded. Relevant values are displayed in Table 6 below.

Table 6. JBER-E Benchmark Data from Previous Permit Term

| Parameter | October | December | February | Average | Compliance Level |
|------------------------|------------|-----------|-----------|-----------|------------------|
| BOD₅ | Non-Detect | 6.9 mg/L | 2 mg/L | 2.9 mg/L | 30 mg/L |
| COD | 17.1 mg/L | 25.7 mg/L | 17.1 mg/L | 19.9 mg/L | 120 mg/L |
| Ammonia | .426 mg/L | .556 mg/L | .334 mg/L | .439 mg/L | 2.14 mg/L |
| pH | 7.7 s.u. | 7.8 s.u. | 7.2 s.u. | 7.4 s.u. | 6.5 – 8.5 s.u. |
| TSS | 10.8 mg/L | 4.7 mg/L | 3.47 mg/L | 6.32 mg/L | 88 mg/L |

8.0 INSPECTIONS

8.1 Routine Facility Inspections

Part 4.1 of the MSGP requires routine facility inspections be conducted at all areas of JBER where industrial materials or activities are exposed to storm water, and of all storm water control measures used to comply with the effluent limits contained in the MSGP. Routine storm water inspections must be conducted quarterly at a minimum, though the permit states that in some cases more frequent inspections may be appropriate at *“areas of the facility with significant activities and materials exposed to stormwater”⁴⁵*.

The following routine facility inspection requirements must be implemented at JBER industrial facilities:

- The inspections must occur while the facility is in operation
- At least one quarter’s inspection (each year) must be conducted when a storm water discharge is occurring
- The inspections must be conducted by qualified personnel⁴⁶
- At least one member of the JBER storm water pollution prevention team must participate in each quarterly inspection

Personnel qualified to conduct routine storm water inspections at JBER are those personnel trained in storm water pollution prevention. 673 CES/CEAN staffs the primary personnel for inspection tasks. Members of JBER’s storm water pollution prevention team are presented in Table 2. Routine storm water inspections are conducted quarterly at JBER, and inspection findings are documented on a form maintained by 673 CES/CEAN. Corrective action required as a result of a routine inspection must be performed consistent with Part 3 of the MSGP.

Part 4.1.2 of the MSGP requires the following documentation for each routine facility inspection:

- The inspection date and time
- The name(s) and signature(s) of the inspector(s)

⁴⁵ See Section 6.1.3.13 of this SWPPP for monthly inspections required under Sector S.

⁴⁶ “Qualified Personnel” is defined in MSGP Appendix A (Definitions, Abbreviations, and Acronyms) as: “Qualified personnel are those who possess the knowledge and skills to assess conditions and activities that could impact stormwater quality at your facility, and who can also evaluate the effectiveness of control measures.”

- Weather information⁴⁷ and a description of any discharges occurring at the time of the inspection
- Any previously unidentified discharges of pollutants from the site
- Any control measures needing maintenance or repairs
- Any failed control measures that need replacement
- Any incidents of noncompliance observed
- Any additional control measures needed to comply with the permit requirements

Blank copies of the forms used at JBER for routine storm water inspections are provided in Appendix C.

8.2 Quarterly Visual Assessment of Storm Water Discharges

Part 4.2.1 of the MSGP states the following: “Once each quarter for the entire permit term, you [permittee] must collect a storm water sample from each outfall (except as noted in Part 4.2.3) and conduct a visual assessment of each of these samples. These samples are not required to be collected consistent with 40 CFR Part 136 procedures but should be collected in such a manner that the samples are representative of the storm water discharge.”

8.2.1 Quarterly Visual Assessment Procedure

The visual assessment must be made:

- Of a sample in a clean, clear glass, or plastic container, and examined in a well-lit area;
- On samples collected within the first 30 minutes of an actual discharge from a storm event. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample must be collected as soon as practicable after the first 30 minutes and the permittee must document why it was not possible to take samples within the first 30 minutes. In the case of snowmelt, samples must be taken during a period with a measurable discharge from the site; and
- For storm events, on discharges that occur at least 72 hours from the previous discharge. The 72-hour storm interval does not apply if the permittee documents that less than a 72-hour interval is representative for local storm events during the sampling period.

⁴⁷ Weather data is provided by the JBER-E Airfield Control Tower.

The samples must be visually inspected for the following water quality characteristics:

- Color
- Odor
- Clarity
- Floating solids
- Settled solids
- Suspended solids
- Foam
- Oil sheen
- Other obvious indicators of storm water pollution

8.2.2 Quarterly Visual Assessment Documentation

Results of these visual assessments must be documented and maintained with this SWPPP. Documentation must include:

- Sample location(s)
- Sample collection date and time, and visual assessment date and time for each sample
- Personnel collecting the sample and performing visual assessment, and their signatures
- Nature of the discharge (i.e., runoff or snowmelt)
- Results of observations of the storm water discharge
- Probable sources of any observed storm water contamination
- If applicable, why it was not possible to take samples within the first 30 minutes

8.2.3 Exceptions to Quarterly Visual Assessments

The following exceptions to conducting quarterly visual assessments are provided in Part 4.2.3 of the MSGP. At JBER, *Adverse Weather Conditions* and *Areas Subject to Snow* are directly applicable.

- *Adverse Weather Conditions:* When adverse weather conditions prevent the collection of samples during the quarter, take a substitute sample during the next qualifying storm event. Documentation of the rationale for no visual assessment for the quarter must be included with SWPPP records as described in MSGP Part 5.4. Adverse conditions are

those that are dangerous or create inaccessibility for personnel, such as local flooding, high winds, or electrical storms, or situations that otherwise make sampling impractical, such as drought or extended frozen conditions.

- *Climates with Irregular Storm Water Runoff:* If the facility is located in an area where limited rainfall occurs during many parts of the year (e.g., arid or semi-arid climate) or in an area where freezing conditions exist that prevent runoff from occurring for extended periods, then the samples for the quarterly visual assessments may be distributed during seasons when precipitation runoff occurs.
- *Areas Subject to Snow:* In areas subject to snow, at least one quarterly visual assessment must capture snowmelt discharge, as described in MSGP Part 6.1.3, taking into account the exception described above for climates with irregular storm water runoff.
- *Inactive and Unstaffed Sites:* The requirement for a quarterly visual assessment does not apply at a facility that is inactive and unstaffed, as long as there are no industrial materials or activities exposed to storm water. To invoke this exception, maintain a statement in the SWPPP as required in MSGP Part 5.1.5.2 indicating that the site is inactive and unstaffed, and that there are no industrial materials or activities exposed to precipitation, in accordance with the substantive requirements in 40 CFR 122.26(g)(4)(iii). The statement must be signed and certified in accordance with MSGP Appendix B, Subsection 11. If circumstances change and industrial materials or activities become exposed to storm water or the facility becomes active and/or staffed, this exception no longer applies and quarterly visual assessments must be immediately resumed. If the permittee is not qualified for this exception at the time the permittee is authorized under this permit, but during the permit term the permittee becomes qualified because the facility is inactive and unstaffed, and there are no industrial materials or activities that are exposed to storm water, then the permittee must include the same signed and certified statement as above and retain it with the records pursuant to Part 5.4.

Inactive and unstaffed facilities covered under Sectors G (Metal Mining), H (Coal Mines and Coal Mining-Related Facilities), and J (Non-Metallic Mineral Mining and Dressing), are not required to meet the “no industrial materials or activities exposed to storm water” standard to be eligible for this exception from quarterly visual assessment, consistent with the requirements established in MSGP Parts 8.G.8.4, 8.H.8.1, and 8.J.8.1.

- *Substantially Identical Outfalls:* If the facility has two or more outfalls are believed to discharge substantially identical effluents, as documented in MSGP Part 5.1.5.2, the permittee may conduct quarterly visual assessments of the discharge at just one of the outfalls and report that the results also apply to the substantially identical outfall(s) provided that the permittee perform visual assessments on a rotating basis of each substantially identical outfall throughout the period of the coverage under this permit.

If storm water contamination is identified through visual assessment performed at a substantially identical outfall, the permittee must assess and modify the control measures as appropriate for each outfall represented by the monitored outfall.

8.3 Comprehensive Site Compliance Evaluation

The CSCE includes inspections of each industrial facility and associated grounds covered by the MSGP and the installation-wide storm water management system, and evaluates the overall effectiveness of JBER's SWPPP. Part 4.3.1 of the MSGP requires the CSCE be conducted by qualified personnel, with at least one member of the storm water pollution prevention team participating. 673 CES/CEAN is responsible for conducting the CSCE at JBER.

8.3.1 Contents of the CSCE

The MSGP requires the following components be examined for the CSCE⁴⁸:

- Areas where spills and leaks have occurred in the past three years
- Industrial materials, residue, or trash that may have or could come into contact with storm water
- Leaks or spills from industrial equipment, drums, tanks, and other containers
- Off-site tracking of industrial or waste materials, or sediment where vehicles enter or exit the site
- Tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas
- Control measures needing replacement, maintenance, or repair
- Areas of No Exposure

The inspections must also include a review of monitoring data collected in accordance with Part 6.2 of the MSGP. Inspectors must consider the results of the past year's visual and analytical monitoring in addition to the elements above.

8.3.2 CSCE Documentation

Findings must be documented for each CSCE and maintained with this SWPPP. In addition, CSCE documentation must be submitted in an annual report as required in Part 7.2 of the MSGP. At a minimum, CSCE documentation must include the following:

- The date of the inspection

⁴⁸ See Section 6.1.3.14 of this SWPPP for CSCE requirements specific to Sector S.

- The name(s) and title(s) of the personnel making the inspection
- Findings from the inspection of facility areas identified above (Section 8.1)
- All observations relating to the implementation of control measures including:
 - Previously unidentified discharges from the site
 - Previously unidentified pollutants in existing discharges
 - Evidence of, or the potential for, pollutants entering the drainage system
 - Evidence of pollutants discharging to receiving waters at all facility outfall(s), and the condition of and around the outfall, including flow dissipation measures to prevent scouring
 - Additional control measures needed to address any conditions requiring corrective action identified during the inspection
- Any required revisions to the SWPPP resulting from the inspection
- Any incidents of noncompliance observed or a certification stating the facility is in compliance with this permit (if there is no noncompliance)
- A statement, signed and certified in accordance with MSGP Appendix B, Subsection 11 of the MSGP

Any corrective action required as a result of the CSCE must be performed consistent with Part 3 of the MSGP. JBER uses ADEC's standard form for the annual reporting required by this permit. A copy of that form is included in Appendix H.

9.0 DOCUMENTATION TO SUPPORT ELIGIBILITY

9.1 Documentation Regarding Endangered Species

MSGP coverage is only available to facilities where storm water discharges, allowable non-storm water discharges, and storm water discharge-related activities will not adversely impact federally listed endangered or threatened species or critical habitat. The 2008 MSGP requires a permittee to meet one of the six criteria (A-F) detailed in Part 1.1.4.5, following the procedures in Appendix E of the MSGP, “Procedures Relating to Endangered Species Protection.” MSGP Appendix E states, “In accordance with Part 5.1.6.1 of this permit, you must keep documentation with your SWPPP to support your determination of eligibility under Part 1.1.4.5, including the process employed and results of the endangered species investigation.”

JBER satisfies Criterion E in MSGP Part 1.1.4.5, which states the following:

Authorizing your stormwater discharges associated with industrial activity, discharge-related activities, and allowable non-stormwater discharges is consistent with the determination that the issuance of the MSGP is not likely to adversely affect any federally-listed endangered and threatened (“listed”) species or designated critical habitat (“critical habitat”). To support your determination that you meet Criterion E, you must provide supporting documentation for your determination.

Under Criterion E, existing dischargers must provide the following information with the completed NOI form:

1. A list of the federally-listed threatened or endangered species or their designated critical habitat that are likely to occur in the “action area”⁴⁹,
2. A list of the pollutant parameters for which you [permittee] have ever exceeded an applicable benchmark or effluent limitations guideline, or for which your discharge has ever been found to cause or contribute to an exceedance of an applicable water quality standard, or to violate State or Tribal water quality requirements (Part 9), and
3. Rationale supporting your determination that you meet Criterion E, including appropriate measures to be undertaken to avoid or eliminate the likelihood of adverse effects.

Appendix D is reserved for the required documentation described above.

⁴⁹ “Action Area” is defined in MSGP Appendix A (Definitions, Abbreviations, and Acronyms) as: “All areas to be affected directly or indirectly by the stormwater discharges, allowable non-stormwater discharges, and stormwater discharge-related activities, and not merely the immediate area involved in these discharges and activities.”

9.2 Documentation Regarding Historic Properties

MSGP coverage is only available to facilities where storm water discharges, allowable non-storm water discharges, and storm water discharge-related activities meet one of the four eligibility criteria (A-D) in MSGP Part 1.1.4.6, Historic Properties Preservation. The process to determine this eligibility must follow the procedures in Appendix F of the MSGP, "Procedures Relating to Historic Properties Preservation."

JBER satisfies Criterion A in MSGP Part 1.1.4.6. MSGP Part 5.1.6.2 states "You [permittee] must keep with your SWPPP the documentation supporting your determination with regard to Part 1.1.4.6 (Historic Properties Preservation)." Appendix E in this SWPPP contains a confirmatory letter to this effect from the Alaska State Historic Preservation Officer (SHPO) and a certification signed by the installation Commander.

9.3 Non-Storm Water Discharges

The MSGP requires documentation that the presence of non-storm water discharges has been evaluated and that all unauthorized discharges have been eliminated. Documentation of the evaluation must include the following:

- The date of any evaluation
- A description of the evaluation criteria used
- A list of the outfalls or onsite drainage points that were directly observed during the evaluation
- The different types of non-storm water discharge(s) and source locations
- The action(s) taken, such as a list of control measures used to eliminate unauthorized discharge(s), if any were identified. For example, a floor drain was sealed, a sink drain was re-routed to sanitary, or an APDES permit application was submitted for an unauthorized cooling water discharge.

673 CES/CEAN maintains non-storm water discharge evaluation documentation in Appendix F.

10.0 SWPPP CERTIFICATION

This SWPPP must be signed and dated in accordance with Appendix B, Subsection 11 of the MSGP. The SWPPP certification is below.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _____ Title: _____

Signature: _____ Date: _____

11.0 SWPPP MODIFICATIONS AND AVAILABILITY

11.1 Required SWPPP Modifications

This SWPPP must be modified whenever necessary to address any of the triggering conditions for corrective action in Part 3.1 of the MSGP, and to ensure that they do not reoccur, or to reflect changes implemented when a review following the triggering conditions in Part 3.2 of the MSGP indicates that changes to control measures are necessary to meet the effluent limits under the permit. Changes to this SWPPP must be made in accordance with the corrective action deadlines in MSGP Parts 3.3 and 3.4, and must be signed and dated in accordance with MSGP Appendix B, Subsection 11.

A SWPPP amendment log/template is provided in Appendix I of this SWPPP (see Section L of the appendix).

11.2 SWPPP Availability

Part 5.3 of the MSGP states, “You must retain a copy of the current SWPPP required by this permit at the facility, and it must be immediately available to EPA; a State, Tribal, or local agency approving SWMPs [ADEC]; the operator of an MS4 receiving discharges from the site; and representatives of the United States Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) at the time of an onsite inspection or upon request. ADEC may provide access to portions of your SWPPP to a member of the public upon request. Confidential Business Information (CBI) may be withheld from the public, but may not be withheld from those staff cleared for CBI review within EPA, USFWS, or NMFS.”

JBER water program staff maintains a copy of this SWPPP at the 673 CES/CEAN office. It is readily available to state, federal, Tribal and regulatory agencies, and available to the public upon request.

Sheets

Figure 4. Storm Water Routing Map: JBER-E

Figure 5. Storm Water Routing Map: JBER-R

Figure 6. Industrial Buildings and Associated Activities

APPENDICES

- A SWPPP CONTENTS
- B SUMMARY OF SPILLS AND LEAKS
- C INSPECTION FORMS
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Appendix A
SWPPP Contents Required by MSGP

| 2008 MSGP Citation | MSGP 2008 SWPPP requirement: "Contents of Your SWPPP" (Part 5.1) | Location in this SWPPP |
|--|--|--|
| 5. Storm water Pollution Prevention Plan (SWPPP) | <p>You must prepare a SWPPP for your facility before submitting your NOI for permit coverage. If you prepared a SWPPP for coverage under a previous NPDES permit, you must review and update the SWPPP to implement all provisions of this permit prior to submitting your NOI. The SWPPP does not contain effluent limitations; the limitations are contained in Part 2 of the permit, and for some sectors, Parts 8 and 9 of the permit. The SWPPP is intended to document the selection, design, and installation of control measures.</p> <p>As distinct from the SWPPP, the additional documentation requirements (see Part 5.4) are intended to document the implementation (including inspection, maintenance, monitoring, and corrective action) of the permit requirements.</p> | This is the SWPPP for JBER's use of the 2008 MSGP. |
| 5.1 Contents of Your SWPPP | <p>For coverage under the MSGP, your SWPPP must contain all of the following elements:</p> <ul style="list-style-type: none"> • Storm water pollution prevention team (see Part 5.1.1); • Site description (see Part 5.1.2); • Summary of potential pollutant sources (see Part 5.1.3); • Description of control measures (see Part 5.1.4); • Schedules and procedures (see Part 5.1.5); • Documentation to support eligibility considerations under other federal laws (see Part 5.1.6); and • Signature requirements (see Part 5.1.7). <p>Where your SWPPP refers to procedures in other facility documents, such as a SPCC Plan or an EMS developed for a National Environmental Performance Track facility, copies of the relevant portions of those documents must be kept with your SWPPP.</p> | |
| 5.1.2 Site Description | <p>Site map. Provide a map showing:</p> <ul style="list-style-type: none"> • the size of the property in acres; • the location and extent of significant structures and impervious surfaces; • directions of storm water flow (use arrows); • locations of all existing structural control measures; • locations of all receiving waters in the immediate vicinity of your facility, indicating if any of the waters are impaired and, if so, whether the waters have TMDLs established for them; • locations of all storm water conveyances including ditches, pipes, and swales; • locations of potential pollutant sources identified under Part 5.1.3.2; • locations where significant spills or leaks identified under Part 5.1.3.3 have occurred; • locations of all storm water monitoring points; | Figures 1, 2, 4, 5, and 6 |

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| | <ul style="list-style-type: none"> • locations of storm water inlets and outfalls, with a unique identification code for each outfall (e.g., Outfall No. 1, No. 2, etc), indicating if you are treating one or more outfalls as "substantially identical" under Parts 4.2.3, 5.1.5.2, and 6.1.1, and an approximate outline of the areas draining to each outfall; • municipal separate storm sewer systems, where your storm water discharges to them; • locations and descriptions of all non-storm water discharges identified under Part 2.1.2.10; • locations of the following activities where such activities are exposed to precipitation: <ul style="list-style-type: none"> ○ fueling stations; ○ vehicle and equipment maintenance and/or cleaning areas; ○ loading/unloading areas; ○ locations used for the treatment, storage, or disposal of wastes; ○ liquid storage tanks; ○ processing and storage areas; ○ immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; ○ transfer areas for substances in bulk; and ○ machinery; and • locations and sources of run-on to your site from adjacent property that contains significant quantities of pollutants. | |
| 5.1.3 Summary of Potential Pollutant Sources | <p>You must document areas at your facility where industrial materials or activities are exposed to storm water and from which allowable non-storm water discharges are released. Industrial materials or activities include, but are not limited to: material handling equipment or activities; industrial machinery; raw materials; industrial production and processes; and intermediate products, by-products, final products, and waste products. Material handling activities include, but are not limited to: the storage, loading and unloading, transportation, disposal, or conveyance of any raw material, intermediate product, final product or waste product. For each area identified, the description must include:</p> | Section 3; Table 4; Figure 6 |
| 5.1.3.1 Activities in the area | <p>A list of the industrial activities exposed to storm water (e.g., material storage; equipment fueling, maintenance, and cleaning; cutting steel beams).</p> | Section 3.1 |
| 5.1.3.2 Pollutants. | <p>A list of the pollutant(s) or pollutant constituents (e.g., crankcase oil, zinc, sulfuric acid, and cleaning solvents) associated with each identified activity. The pollutant list must include all significant materials that have been handled, treated, stored, or disposed, and that have been exposed to storm water in the 3 years prior to the date you prepare or amend your SWPPP.</p> | Section 3.1 |

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| 5.1.3.3 <i>Spills and Leaks.</i> | You must document where potential spills and leaks could occur that could contribute pollutants to storm water discharges, and the corresponding outfall(s) that would be affected by such spills and leaks. You must document all significant spills and leaks of oil or toxic or hazardous pollutants that actually occurred at exposed areas, or that drained to a storm water conveyance, in the 3 years prior to the date you prepare or amend your SWPPP. [Note: Significant spills and leaks include, but are not limited to, releases of oil or hazardous substances in excess of quantities that are reportable under CWA Section 311 (see 40 CFR 110.6 and 40 CFR 117.21) or Section 102 of the Comprehensive Environmental Response, Compensation, and Liability Act, 42 USC §9602. This permit does not relieve you of the reporting requirements of 40 CFR 110, 40 CFR 117, and 40 CFR 302 relating to spills or other releases of oils or hazardous substances.] | Section 3.2; Figure 8 |
| 5.1.3.4 <i>Non-Storm water Discharges.</i> | You must document that you have evaluated for the presence of non-storm water discharges and that all unauthorized discharges have been eliminated. Documentation of your evaluation must include: <ul style="list-style-type: none"> • The date of any evaluation; • A description of the evaluation criteria used; • A list of the outfalls or onsite drainage points that were directly observed during the evaluation; • The different types of non-storm water discharge(s) and source locations; and • The action(s) taken, such as a list of control measures used to eliminate unauthorized discharge(s), if any were identified. For example, a floor drain was sealed, a sink drain was re-routed to sanitary, or an NPDES permit application was submitted for an unauthorized cooling water discharge. | Sections 4.7 and 9.3 |
| 5.1.3.5 <i>Salt Storage</i> | You must document the location of any storage piles containing salt used for deicing or other commercial or industrial purposes. | Section 5.8 |
| 5.1.3.6 <i>Sampling Data.</i> | You must summarize all storm water discharge sampling data collected at your facility during the previous permit term. | Section 7.8 |
| 5.1.4 Description of Control Measures. | | |
| 5.1.4.1 <i>Control Measures to Meet Technology-Based and Water Quality-Based Effluent Limits.</i> | You must document the location and type of control measures you have installed and implemented at your site to achieve the non-numeric effluent limits in Part 2.1.2, and where applicable in Part 8, the effluent limitations guidelines-based limits in Part 2.1.3, the water quality-based effluent limits in Part 2.2, and any agreed-upon endangered species or National Environmental Policy Act (NEPA)-related requirements in Parts 2.3 and 2.4, and describe how you addressed the control measure selection and design considerations in Part 2.1.1. This documentation must describe how the control measures at your site address both the pollutant sources identified in Part 5.1.3, and any storm water run-on that commingles with any discharges covered under this permit. | Sections 4, 5, 6, and 9 |

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| 5.1.5 Schedules and Procedures | | |
| <p><i>5.1.5.1 Pertaining to Control Measures Used to Comply with the Effluent Limits in Part 2.</i></p> | <p>The following must be documented in your SWPPP:</p> <ul style="list-style-type: none"> • Good Housekeeping (See Part 2.1.2.2) – A schedule for regular pickup and disposal of waste materials, along with routine inspections for leaks and conditions of drums, tanks and containers; • Maintenance (See Part 2.1.2.3) – Preventative maintenance procedures, including regular inspections, testing, maintenance, and repair of all industrial equipment and systems, and control measures, to avoid situations that may result in leaks, spills, and other releases, and any back-up practices in place should a runoff event occur while a control measure is off-line; • Spill Prevention and Response Procedures (See Part 2.1.2.4) – Procedures for preventing and responding to spills and leaks. You may reference the existence of other plans for SPCC developed for the facility under Section 311 of the CWA or BMP programs otherwise required by an NPDES permit for the facility, provided that you keep a copy of that other plan onsite and make it available for review consistent with Part 5.3; and • Employee Training (Part 2.1.2.9) – A schedule for all types of necessary training. | <p>Sections 4, 5, 6, and 8</p> |
| <p><i>5.1.5.2 Pertaining to Monitoring and Inspection.</i></p> | <p>You must document in your SWPPP your procedures for conducting the five types of analytical monitoring specified by this permit, where applicable to your facility, including:</p> <ul style="list-style-type: none"> • Benchmark monitoring (see Part 6.2.1); • Effluent limitations guidelines monitoring (see Part 6.2.2); • State- or Tribal-specific monitoring (see Part 6.2.3); • Impaired waters monitoring (see Part 6.2.4); and • Other monitoring as required by EPA (see Part 6.2.5). <p>For each type of monitoring, your SWPPP must document:</p> <ul style="list-style-type: none"> • Locations where samples are collected, including any determination that two or more outfalls are substantially identical; • Parameters for sampling and the frequency of sampling for each parameter; • Schedules for monitoring at your facility, including schedule for alternate monitoring periods for climates with irregular storm water runoff (see Part 6.1.6); • Any numeric control values (benchmarks, effluent limitations guidelines, TMDL-related requirements, or other requirements) applicable to discharges from each outfall; and • Procedures (e.g., responsible staff, logistics, laboratory to be used, etc.) for gathering storm event data, as specified in Part 6.1. <p>If you are invoking the exception for inactive and unstaffed sites for benchmark monitoring, you must include in your SWPPP the information to support this claim as required by Part 6.2.1.3.</p> | <p>Sections 7 and 8</p> |

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| | <p>You must document the following in your SWPPP if you plan to use the substantially identical outfall exception for your quarterly visual assessment requirements in Part 4.2 or your benchmark monitoring requirements in Part 6.2.1:</p> <ul style="list-style-type: none"> • Location of each of the substantially identical outfalls; • Description of the general industrial activities conducted in the drainage area of each outfall; • Description of the control measures implemented in the drainage area of each outfall; • Description of the exposed materials located in the drainage area of each outfall that are likely to be significant contributors of pollutants to storm water discharges; • An estimate of the runoff coefficient of the drainage areas (low = under 40%; medium = 40 to 65%; high = above 65%); and • Why the outfalls are expected to discharge substantially identical effluents. <p>You must document in your SWPPP your procedures for performing, as appropriate, the three types of inspections specified by this permit, including:</p> <ul style="list-style-type: none"> • Routine facility inspections (see Part 4.1); • Quarterly visual assessment of storm water discharges (see Part 4.2); and • Comprehensive site inspections (see Part 4.3). <p>For each type of inspection performed, your SWPPP must identify:</p> <ul style="list-style-type: none"> • Person(s) or positions of person(s) responsible for inspection; • Schedules for conducting inspections, including tentative schedule for facilities in climates with irregular storm water runoff discharges (see Part 4.2.3); and • Specific items to be covered by the inspection, including schedules for specific outfalls. <p>If you are invoking the exception for inactive and unstaffed sites relating to routine facility inspections and quarterly visual assessments, you must include in your SWPPP the information to support this claim as required by Parts 4.1.3 and 4.2.3.</p> | |
| 5.1.6 Documentation to Support Eligibility Considerations Under Other Federal Laws. | | |
| 5.1.6.1 Documentation Regarding Endangered Species. | You must keep with your SWPPP the documentation supporting your determination with regard to Part 1.1.4.5 (Endangered and Threatened Species and Critical Habitat Protection). | Section 9.1; Appendix D |
| 5.1.6.2 Documentation Regarding Historic | You must keep with your SWPPP the documentation supporting your determination with regard to Part 1.1.4.6 (Historic Properties Preservation). | Section 9.2; Appendix E |

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| <i>Properties.</i> | | |
| <i>5.1.6.3 Documentation Regarding NEPA Review.</i> | You must keep with your SWPPP the documentation supporting your certification of eligibility under Part 1.1.2.5 (Discharges Subject to Any New Source Performance Standards). | NA |
| 5.1.7 Signature Requirements. | You must sign and date your SWPPP in accordance with Appendix B, Subsection 11, including the date of signature. | Section 10.0 |
| Sector-Specific SWPPP Requirements for Industrial Activities | | |
| Sector J – Non-Metallic Mineral Mining and Dressing | | |
| 8.J.6.1 <i>Nature of Industrial Activities.</i> | (See also Part 5.1.2) Document in your SWPPP the mining and associated activities that can potentially affect the stormwater discharges covered by this permit, including a general description of the location of the site relative to major transportation routes and communities. | Section 6.5; Figure 9 |
| 8.J.6.2 <i>Site Map.</i> | (See also Part 5.1.2) Document in your SWPPP the locations of the following (as appropriate): mining or milling site boundaries; access and haul roads; outline of the drainage areas of each stormwater outfall within the facility with indications of the types of discharges from the drainage areas; location(s) of all permitted discharges covered under an individual NPDES permit, outdoor equipment storage, fueling, and maintenance areas; materials handling areas; outdoor manufacturing, outdoor storage, and material disposal areas; outdoor chemicals and explosives storage areas; overburden, materials, soils, or waste storage areas; location of mine drainage dewatering or other process water; heap leach pads; off-site points of discharge for mine dewatering and process water; surface waters; boundary of tributary areas that are subject to effluent limitations guidelines; and location(s) of reclaimed areas. | |
| 8.J.6.3 <i>Potential Pollutant Sources.</i> | (See also Part 5.1.3) For each area of the mine or mill site where stormwater discharges associated with industrial activities occur, document in your SWPPP the types of pollutants (e.g., heavy metals, sediment) likely to be present in significant amounts. For example, phosphate mining facilities will likely need to document pollutants such as selenium, which can be present in significant amounts in their discharges. Consider these factors: the mineralogy of the waste rock (e.g., acid forming); toxicity and quantity of chemicals used, produced, or discharged; the likelihood of contact with stormwater; vegetation of site (if any); and history of significant leaks or spills of toxic or hazardous pollutants. Also include a summary of any existing waste rock or overburden characterization data and test results for potential generation of acid rock drainage. | |

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| 8.J.6.4 <i>Stormwater Controls.</i> | To the extent that you use any of the control measures in Part 8.J.5.2, document them in your SWPPP pursuant to Part 5.1.4. If control measures are implemented or planned but are not listed here (e.g., substituting a less toxic chemical for a more toxic one), include descriptions of them in your SWPPP. | |
| 8.J.6.4 <i>Employee Training.</i> | All employee training(s) conducted in accordance with Part 8.J.5.1 must be documented with the SWPPP. | |
| 8.J.6.5 <i>Certification of Permit Coverage for Commingled Non-Stormwater Discharges.</i> | If you determine that you are able to certify, consistent with Part 8.J.5.3, that a particular discharge composed of commingled stormwater and non-stormwater is covered under a separate NPDES permit, and that permit subjects the non-stormwater portion to effluent limitations prior to any commingling, you must retain such certification with your SWPPP. This certification must identify the non-stormwater discharges, the applicable NPDES permit(s), the effluent limitations placed on the non-stormwater discharge by the permit(s), and the points at which the limitations are applied. | |
| Sector K – Hazardous Waste Treatment, Storage, or Disposal Facilities | | |
| No additional SWPPP Requirements. | | |
| Sector S – Air Transportation | | |
| 8.S.4.1 <i>Drainage Area Site Map.</i> | (See also Part 5.1.2) Document in the SWPPP the following areas of the facility and indicate whether activities occurring there may be exposed to precipitation/surface runoff: aircraft and runway deicing operations; fueling stations; aircraft, ground vehicle and equipment maintenance/cleaning areas; storage areas for aircraft, ground vehicles and equipment awaiting maintenance. | Section 6.1; Figure 6 |
| 8.S.4.2 <i>Potential Pollutant Sources.</i> | (See also Part 5.1.3) In your inventory of exposed materials, describe in your SWPPP the potential for the following activities and facility areas to contribute pollutants to storm water discharges: aircraft, runway, ground vehicle and equipment maintenance and cleaning; aircraft and runway deicing operations (including apron and centralized aircraft deicing stations, runways, taxiways and ramps). If you use deicing chemicals, you must maintain a record of the types (including the MSDS) used and the monthly quantities, either as measured or, in the absence of metering, as estimated to the best of your knowledge. This includes all deicing chemicals, not just glycols and urea (e.g., potassium acetate), because large quantities of these other chemicals can still have an adverse impact on receiving waters. Tenants or other fixed-based operations that conduct deicing operations must provide the above information to the airfield authority for inclusion with any comprehensive air transportation facility SWPPPs. | |

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| 8.S.4.3 <i>Vehicle and Equipment Wash water Requirements.</i> | Attach to or reference in your SWPPP, a copy of the NPDES permit issued for vehicle/equipment wash water or, if an NPDES permit has not been issued, a copy of the pending application. If an industrial user permit is issued under a local pretreatment program, include a copy in your SWPPP. In any case, if you are subject to another permit, describe your control measures for implementing all non-storm water discharge permit conditions or pretreatment requirements in your SWPPP. If wash water is handled in another manner (e.g., hauled offsite, retained onsite), describe the disposal method and attach all pertinent documentation/information (e.g., frequency, volume, destination, etc.) in your SWPPP. | |
| 8.S.4.4 <i>Documentation of Control Measures Used for Management of Runoff.</i> | Document in your SWPPP the control measures used for collecting or containing contaminated melt water from collection areas used for disposal of contaminated snow. | |
| Sector X – Printing and Publishing | | |
| 8.X.3.1 <i>Description of Good Housekeeping Measures for Material Storage Areas.</i> | In connection with Part 8.X.2.1.1, describe in the SWPPP the containment area or enclosure for materials stored outdoors. | Section 6.4 |

Appendix B
Summary of Spills and Leaks
(July 2009 through June 2012)

Appendix C

Inspection Forms

- Quarterly Storm Water Pollution Prevention Inspection Checklist
- Quarterly Storm Water Pollution Prevention Inspection Checklist for Fueling and Fuel Storage Facilities
 - MSGP Industrial Discharge Monitoring Report

Appendix D
U.S. Fish and Wildlife Service and National Marine Fisheries Service
Letters

[Reserved for letter(s) from appropriate wildlife agencies, or other documentation meeting this MSGP eligibility requirement, and certification signed by the JBER Commander.]

Appendix E
Alaska State Historic Preservation Officer Letter

[Reserved for letter(s) from appropriate agency, or other documentation meeting this MSGP eligibility requirement, and certification signed by the JBER Commander.]

Appendix F
Certification of No Unauthorized Discharges

[To be provided by JBER.]

Appendix G

Record of Maintenance and Repairs

[This appendix is reserved for JBER BMP maintenance and repair documentation.]

Appendix H
ADEC MSGP Annual Reporting Form

Appendix I

Additional MSGP Documentation Template

Appendix J

Numeric Water Quality Standards Applicable to JBER Outfalls

The following pages are taken from:

Alaska Water Quality Standards 18 AAC 70
Amended as of April 8, 2012

Appendix K
Industrial Stormwater Monitoring and Sampling Guide (March 2009)

Appendix L

No Exposure Certifications